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PAPER – 4 : COST ACCOUNTING AND FINANCIAL MANAGEMENT

Section A : Cost Accounting

QUESTIONS

1. (a) Classify each of the followings on the basis of behavioural aspects of cost.
 - (i) Telephone Bills
 - (ii) Depreciation
 - (iii) Factory rental
 - (iv) Supplies and other indirect material
 - (v) Advertising
 - (vi) Repair and Maintenance
 - (vii) Factory manager's salary
 - (viii) Royalty payments.
- (b) Which of the following costs are likely to be treated as controllable cost ?
 - (i) Price paid for materials
 - (ii) Charge for floor space
 - (iii) Raw materials used
 - (iv) Electricity used for machinery
 - (v) Machinery depreciation
 - (vi) Direct labour
 - (vii) Insurance on machinery
 - (viii) Share of costs of industrial relations department
2. (a) "Costs may be classified in a variety of ways according to their nature and the information needs of the management." Explain.
- (b) "Relevant cost analysis helps in drawing the attention of managers to those elements of cost which are relevant for the decision." Comment.
3. (a) What is spoilage? Give its treatment in Cost Accounting.
- (b) You are required to calculate the following levels for part No. 123456 from the information given there under:
 - (a) Re-ordering level
 - (b) Maximum level
 - (c) Minimum level.
 - (d) Danger level
 - (e) Average stock level.

The following data may be used to calculate the re-ordering quantity.

| | |
|--|--------|
| 1. Total cost of purchasing relating to the order | Rs. 20 |
| 2. Number of units to be purchased during the year | 5,000 |
| 3. Purchase price per unit including transportation cost | Rs. 50 |
| 4. Annual cost of storage of one unit | Rs. 5. |

| | | |
|---------------------|-----------------------------|------------------|
| Lead Times | Average | 10 days |
| | Maximum | 15 days |
| | Minimum | 6 days |
| | Max. for emergency purchase | 4 days |
| Rate of Consumption | Average | 15 units per day |
| | Maximum | 20 units per day |

4. Mr. Debasish is working by employing 10 skilled workers. Mr. Debasish is considering the introduction of some incentive scheme- either Halsey scheme (with 50% bonus) or Rowan scheme- of wage payment for increasing the labour productivity to tackle with the growing demand for the product by 25%. He feels that, if the proposed incentive scheme could bring about an average 20% increase over the present earnings of the workers, it could be sufficient incentive for them to increase production and he has accordingly given this assurance to the workers.

As a result of this assurance, the increase in productivity has been observed as revealed by the following figures for the current month:

| | |
|---|-------------|
| Hourly rate of wages (guaranteed) | Rs. 2.00 |
| Average time for producing 1 piece by one worker at the previous performance (This may be taken as time allowed) | 2 hours |
| Number of working days in the month | 25 |
| Number of working hours per day for each worker | 8 |
| Actual production during the month | 1,250 units |

You are required to:

- (1) Calculate effective rate of earnings per hour under Halsey scheme and Rowan scheme.
 - (2) Calculate the savings to Mr. Debasish in terms of direct labour cost per piece under the above schemes.
 - (3) Give your consultancy to Mr. Debasish about the selection of the scheme to fulfil his assurance.
5. (a) Assuming a man day of 8 hours, you are required to calculate the labour cost per man day. The following data has been provided.

| | |
|--|---|
| (a) Basic Salary | Rs. 2 per day |
| (b) Dearness Allowance | 25 paise per every point over 100 cost of living index for working class. Current cost of living index is 700 points. |
| (c) Leave Salary | 10% of (a) and (b) |
| (d) Employer's contribution to Provident Fund | 8% of (a), (b) and (c) |
| (e) Employer's contribution to State Insurance | 2.5% of (a), (b) and (c) |
| (f) Expenditure on amenities to labour | Rs. 20 per head per mensem |
| (g) Number of working days in a month | 25 days of 8 hours each |

6. Raunak Ltd. is the manufacturer of a special product and follows the policy of EOQ (Economic Order Quantity) for one of its components. The component's details are given as below:

| | |
|---|-----------------------|
| | Rs. |
| Purchase price per component | 200 |
| Cost of an order | 100 |
| Annual cost of carrying one unit in inventory | 10% of purchase price |

Total cost of carrying inventory and ordering per annum Rs. 4,000

The company has been offered a discount of 2% by the vendor on the price of the component provided the lot size is 2,000 components at a time.

You are required to:

- Calculate the EOQ;
- Advise whether the quantity discount offer should be accepted or not.
(Assume that the inventory carrying cost does not vary according to discount policy);
- What advice you will give if the company is offered 5% discount on a single order?

7. Neptune Company Ltd. is making a study of the relative profitability of the two products – X and Y. In addition to Direct costs, Indirect selling & distribution costs to be allocated between the two products X and Y are given below:

| | Rs. |
|--|----------|
| Insurance charges for inventory (finished) | 78,000 |
| Storage costs | 1,40,000 |
| Packing and forwarding charges | 7,20,000 |
| Salesmen's salaries | 8,50,000 |
| Invoicing costs | 4,50,000 |

Other informations are:

| | Product X | Product Y |
|--|-----------|-----------|
| Selling price per unit (Rs.) | 500 | 1,000 |
| Cost per unit (exclusive of indirect selling & distribution costs) | Rs. 300 | Rs. 600 |
| Annual sales in units | 10,000 | 8,000 |
| Average inventory (in units) | 1,000 | 800 |
| Total number of invoices | 2,500 | 2,000 |

One unit of Product X requires a storage space twice as much as Product Y. The cost of packing and forwarding one unit is the same for both the products. Salesmen are paid salary added with commission @ 5% on sales. Equal amount of energy are put forth on the sales of each of the products.

You are required to prepare:

- A schedule showing the apportionment of the Indirect selling and distribution costs between the two products.
 - Prepare a statement showing the relative profitability of the two products.
8. Gupta and Gupta Investment Co. Ltd. provide tax advice to multinational firms, Gupta and Gupta Investment Co. Ltd. charges clients for (a) direct professional time (at an hourly rate) and (b) support services (at 30 per cent of the direct professional costs billed). The billing rate per hour for three professionals working with the company are as follows:

| Professional | Billing rate per hour |
|--------------|-----------------------|
| | Rs. |
| Sachin | 5,000 |
| Sourav | 1,200 |
| Rahul | 800 |

Gupta and Gupta Investment Co. Ltd. has just prepared the May bills for their two main clients. The hours of professional time spent on each of them are as follows:

| | |
|----------------------------------|----------|
| | Rs. |
| Stores ledger control account | 85,400 |
| Work in progress control account | 1,67,350 |
| Finished goods control account | 49,250 |
| Cost ledger control account | 3,02,000 |

The following transactions took place during the month:

| | |
|---|--------|
| | Rs. |
| Material: | |
| Purchases | 42,700 |
| Issues to production | 63,400 |
| Issues to general maintenance | 1,450 |
| Issues to construction of manufacturing equipment | 7,650 |

Factory wages:

| | |
|------------------------|----------|
| Total gross wages paid | 1,24,000 |
|------------------------|----------|

Rs. 75,750 of the above wages are direct wages while Rs. 12,500 has been expended on the construction of manufacturing equipment; the balance being the amount paid as indirect wages.

The actual amount of production overhead incurred excluding the items shown above amounted to Rs. 1,52,350 out of which Rs. 30,000 was absorbed by the manufacturing equipment under construction and Rs. 7,550 was under absorbed. As per the policy of Puja Ltd., the under absorbed overhead needed to be written off at the month end. The company shall also pay Rs. 2,150 as royalty for the relevant months production to an inventor from whom technology had been bought.

Selling overheads : Rs. 22,000

Sales : Rs. 4,10,000

The company's gross profit margin is 25% on factory cost.

At the end of the month stocks of work in progress had increased by Rs. 12,000. The manufacturing equipment under construction was completed within the month, and transferred out of the cost ledger at the end of the month.

You are required to prepare the relevant control accounts, costing profit and loss account and any other accounts you consider necessary to record the above transactions in the cost ledger for the concerned month.

12. The following data are available in respect of Process for the month of June, 2007:

| | |
|--------------------------|----------------------------|
| Opening work-in-progress | 2,250 Units at Rs. 11,250 |
| Degree of Completion: | |
| Materials | 100% |
| Labour | 60% |
| Overheads | 60% |
| Input of materials | 22,750 Units at Rs. 88,500 |
| Direct wages | Rs. 20,500 |
| Production overheads | Rs. 41,000 |
| Units scrapped | 3,000 Units |
| Degree of Completion: | |
| Material | 100% |
| Labour | 70% |

| | |
|--|--------------|
| Production overheads | 70% |
| Closing work-in-progress: | 2,500 Units |
| Degree of Completion: | |
| Material | 100% |
| Labour | 80% |
| Production overheads | 80% |
| Units transferred to the next process: | 19,500 Units |

Normal process loss is 10% of total input (opening stock plus units put in). Scrap value is Rs. 3.00 per unit. The company follows FIFO method of inventory valuation;

You are required to:

- (i) Prepare statement of equivalent production
 - (ii) Prepare statement of cost per equivalent unit for each element and cost of abnormal loss, closing work-in-progress and units transferred to next process; and
 - (iii) Prepare process I account.
13. In an Oil Mill four products emerge from a refining process. The total cost of input during the quarter ending March 2007 is Rs. 1,48,000. The output, sales and additional processing costs are as under:

| Products | Output in Litres | Additional processing cost after split off | Sales value |
|----------|------------------|--|-------------|
| ACH | 8,000 | 43,000 | 1,72,500 |
| BCH | 4,000 | 9,000 | 15,000 |
| CSH | 2,000 | — | 6,000 |
| DSH | 4,000 | 1,500 | 45,000 |

In case these products were disposed off at the split off point that is before further processing, the selling price would have been:

| ACH | BCH | CSH | DSH |
|-------|------|------|------|
| 15.00 | 6.00 | 3.00 | 7.50 |

Prepare a statement of profitability based on:

- (i) If the products are sold after further processing is carried out in the mill.
 - (ii) If they are sold at the split off point.
14. Answer the following questions:
- (a). Are fixed costs per unit variable in nature? If yes, why?
 - (b). Amongst the four alternatives provided to you below, which would be the most appropriate basis for apportioning machinery insurance costs to cost centres within a factory and why?
 - (1). The number of machines in each cost centre
 - (2). The floor area occupied by the machinery in each cost centre
 - (3). The value of the machinery in each cost centre
 - (4). The operating hours of the machinery in each cost centre.
 - (c). Department L production overheads are absorbed using a direct labour hour rate. Budgeted production overheads for the department were Rs. 480,000 and the actual labour hours were 100,000. Actual production overheads amounted to Rs. 516,000. Based on the above data, and assuming that the production overheads were over absorbed by Rs. 24,000, what was the overhead absorption rate per labour hour?

(d). When material prices fluctuate widely, what is the most suitable method (from amongst the Weighted Average, LIFO or FIFO) for pricing material ?

15. Minda Corporation Limited undertook a contract for Rs. 5,00,000 on 1st April 2006. On 31st March 2007 when the accounts were closed, the following details about the contract were gathered:

| | Rs. |
|----------------------------|----------|
| Materials purchased | 1,00,000 |
| Wages paid | 45,000 |
| General expenses | 10,000 |
| Plant purchased | 50,000 |
| Material in hand 31.3.1996 | 25,000 |
| Wages accrued 31.3.1996 | 5,000 |
| Work certified | 2,00,000 |
| Cash received | 1,50,000 |
| Work uncertified | 15,000 |
| Depreciation of plant | 5,000 |

The contract contained an escalation clause, which read as follows:

"In the event of increase(s) of prices of materials and rates of wages by more than 5%, the contract price would be increased accordingly by 25% of the rise of the cost of materials and wages beyond 5% in each case."

It was found that since the date of signing the agreement, the prices of materials and wage rates increased by 25%. The value of the work certified does not take into account the effect of the above clause.

Prepare the contract account. The workings should form part of your answer.

16. A factory with two production processes. Normal loss in each process is 10% and scrapped units sell for Rs. 0.50 each from process 1 and Rs. 3 each from process 2. Relevant information for costing purposes relating to period 5 is as follows.

| Direct materials added: | Process X | Process Y |
|------------------------------------|----------------------------|----------------------------|
| Units | 2,000 | 1,250 |
| Cost | Rs. 8,100 | Rs. 1,900 |
| Direct labour | Rs. 4,000 | Rs. 10,000 |
| Production overhead | 150% of direct labour cost | 120% of direct labour cost |
| Output to process 2/finished goods | 1,750 units | 2,800 units |
| Actual production overhead | Rs. 17,800 | |

You are required to:

Prepare the accounts for process X, process Y, scrap, abnormal loss or gain and production overhead.

17. (a) Explain in brief the purpose of Cost Audit.
 (b) What is Cost reduction. Explain its Advantages
18. (a) Define uniform costing. Explain its Limitations.
 (b) Differentiate between Production Account and Cost Sheet.

19. The following particulars were extracted from the records of Epsilon Ltd. on 31st December:

| | Dept A | Dept. B | Dept. C |
|-------------------|--------|---------|---------|
| | Rs. | Rs. | Rs. |
| Overhead incurred | 2,000 | 1,500 | 2,500 |
| Overhead absorbed | 2,200 | 1,400 | 2,250 |

The departmental loads during the three months to 31st December averaged:

Dept. A 100% of normal capacity

Dept. B 75% of normal capacity

Dept. C 50% of normal capacity

How would you deal with the balances under and over-absorbed? What preliminary enquiries would you make?

20. Discuss briefly the characteristics of Job, Batch and Contract Costing.

21. Distinguish between:

- (a) Production Account and Cost Sheet.
- (b) Controllable cost and uncontrollable cost.
- (c) Bin cards and Stores ledger.
- (d) Explicit costs and implicit costs.
- (e) Cost driver and cost pool.

SUGGESTED ANSWERS/HINTS

1. (a) (i) SV
(ii) F
(iii) F
(iv) V
(v) F (Advertising is a discretionary cost.)
(vi) SV
(vii) F
(viii) V
- (b) Controllable (iii),(iv),(vi)
Non controllable (i),(ii),(v),(vii),(viii)
2. (a) Cost classification is the process of grouping costs according to their characteristics. Costs are classified or grouped according to their common characteristics. Costs may be classified according to elements, according to functions or operations, according to their behaviour, according to controllability or according to normality.

The break up of the aggregate costs into relevant types, is an essential pre-requisite of decision making as well as of controlling costs. Classification of costs on different bases is thus necessary for various purposes. For the purpose of decision-making and control, costs are distinguished on the basis of their relevance to different type of decisions and control functions. The importance of distinguishing costs as direct or indirect lies in the fact that direct costs of a product or an activity can be accurately allocated while indirect costs have to be apportioned on the basis of certain assumptions. This is so because direct costs are controllable at the operational level whereas indirect costs are not amenable to such control.

- (b) Relevant costs are pertinent or valid costs for a decision. These bear upon or 'influence decision' and are directly related to the decisions to be made. These are critical to the decision, and have significance for it. These are the costs which generally respond to managerial decision making, and have significance in arriving at correct conclusions. These costs are capable of making a difference in user-decisions and enter into a choice between alternative courses of action. In specific terms, relevant costs for decisions are defined as "expected future costs that will differ under alternatives".

Relevant costs are futuristic in nature. These are the costs that are expected to occur during the time period covered by the decision. These costs are different between alternatives being considered. Only costs that differ among decision alternatives are relevant to a decision.

3. (a) Spoilage: It refers to materials which are badly damaged in manufacturing operations and they cannot be rectified economically and hence taken out of the process to be disposed off in some manner without further processing. Spoilage may be normal or abnormal.

Normal spoilage: It arises under efficient operating conditions. It is an inherent result of the particular process and thus uncontrollable in the short run. The normal spoilage costs are included in costs either by charging the loss due to spoilage to the production order or by charging it to production overhead so that it is spread over all the products. Any value realised from spoilage is credited to production order or production overhead account as the case may be.

Abnormal spoilage: Abnormal spoilage is that which arises due to causes not inherent in the manufacturing process. The cost of abnormal spoilage is charged to costing profit and loss account.

- (b) a. Re-ordering level = Maximum usage \times maximum lead time
 = $20 \times 15 = 300$ units.
- b. Maximum level = Re-ordering level + Re-order quantity (1) – Minimum usage (2) \times Minimum lead time
 = $300 + 200 - 10 \times 6 = 440$ units
- c. Minimum level = Re-ordering level – Average consumption \times Average lead time
 = $300 - 15 \times 10 = 150$ units
- d. Danger level = Average consumption \times Maximum lead time for emergency Purchases
 = $15 \times 4 = 60$ units
- e. Average stock level = Minimum level + $\frac{1}{2} \times$ Re-order quantity
 = $150 \times \frac{1}{2} \times 200 = 250$ units

Working Note:

$$1. \text{ Re-order Quantity} = \sqrt{\frac{2QR}{CP}} = \sqrt{\frac{2 \times 5,000 \times 20}{10\% \text{ of } 50}} = 200 \text{ units}$$

Where, Q = Annual purchase = 5,000; R = Ordering cost = Rs. 20

C = Storage cost % of P = Price per unit = Rs.. 50.

2. Minimum Usage has been calculated as follows:

$$\text{Average Usage} = \frac{\text{Minimum Usage} + \text{Maximum Usage}}{2}$$

$$\text{or } 2 \times \text{Average Usage} = \text{Minimum Usage} + \text{Maximum Usage}$$

$$2 \times 15 \text{ units} = \text{Minimum Usage} + 20 \text{ units}$$

$$\text{Minimum usage} = 30 \text{ units} - 20 \text{ units} = 10 \text{ units.}$$

| | |
|---|--------------------|
| 4. Production during the month | <u>1,250 units</u> |
| Time allowed for 1250 units @ 2 hours per unit (1250x2 hours) | 2,500 hours |
| Actual time taken 25 days x 8 hours x 10 workers | <u>2,000 hours</u> |
| Time saved | <u>500 hours</u> |

Halsey Scheme:

| | |
|---|--------------|
| | Rs. |
| Basic Wages of 10 workers: 2,000 hours @ Rs. 2 per hour | 4,000 |
| Bonus @ 50% x (500 x Rs. 2) | <u>500</u> |
| Total wages for 2,000 hours | <u>4,500</u> |

$$\text{Effective hourly rate of earnings} = \frac{\text{Rs. } 4,500}{2,000} = \text{Rs. } 2.25$$

$$\text{Labour cost per piece} = \frac{\text{Rs. } 4,500}{1,250} = \text{Rs. } 3.60$$

Saving in terms of direct labour cost per unit (Rs. 4.00 - Rs. 3.60) = Rs. 0.40.

Rowan Scheme:

| | |
|---|--------------|
| | Rs. |
| Basic Wages (as calculated under Halsey scheme) | 4,000 |
| Bonus: $\frac{500}{2,500} \times \text{Rs. } 4,000$ | <u>800</u> |
| Total wages for 2,000 hours | <u>4,800</u> |

$$\text{Effective hourly rate of earnings} = \frac{\text{Rs. } 4,800}{2,000} = \text{Rs. } 2.40$$

$$\text{Labour cost per unit} = \frac{\text{Rs. } 4,800}{1,250} = \text{Rs. } 3.84$$

Saving in terms of direct labour cost per unit (Rs. 4.00 - Rs. 3.84) = Rs. 0.16.

From the calculations shown above it is clear that, saving in labour cost under the Halsey scheme (Rs. 0.40 per unit) is more than that under the Rowan scheme (Rs. 0.16 per unit). The Halsey scheme does not, however, fulfill the guarantee of 20% increase in average earnings of the workers (i.e., 20% of Rs. 2 or Rs. 0.40 per hour, actual increase being 12.5% only), while the Rowan scheme fulfils this assurance. Hence it is advisable that Mr. Debasish shall adopt the Rowan scheme.

5. (a) STATEMENT OF LABOUR COST
(per man-day of 8 hours)

| | |
|--|------|
| | Rs. |
| (a) Basic Salary | 2.00 |
| (b) Dearness Allowance @ 25 paise per every point over 100 cost of living index for a month of 25 days $\frac{600 \times 25}{100} \times \frac{1}{25} =$ | 6.00 |
| (c) Leave Salary -10% of (a) and (b) $\frac{8 \times 10}{100} =$ | 0.80 |

| | |
|--|-------|
| (d) Employer's contribution to Provident Fund 8% of (a), (b) and (c) $\frac{8.80 \times 8}{100} =$ | 0.70 |
| (e) Employer's contribution to State Insurance 2.5% of (a), (b) and (c) $= \frac{8.80 \times 2.5}{100} =$ | 0.22 |
| (f) Amenities to labour @ Rs. 20 per head per month of 25 working days $= \frac{20}{25} =$ | 0.80 |
| Total | 10.52 |

6. (a) Calculation of EOQ:

Annual consumption of inventory in units has not been given in the problem. The following relationship in the various items of E.O.Q may be used to determine this figure:

$$\text{Total cost of carry inventory and ordering per annum} = \sqrt{2C_0OC_c}$$

Where,

C_0 = Consumption per annum in units.

O = ordering cost per order.

C_c = carrying cost of one unit of inventory for one year.

$$\text{Or } Rs. 4000 = \sqrt{2C_0 * Rs.100 * Rs.20}$$

$$Rs. 4000 = \sqrt{4,000 * C_0}$$

$$Rs. 4000 * 4000 = 4000 * C_0$$

$$Rs. C_0 = 4000 \text{ units}$$

$$EOQ = \sqrt{\frac{2C_0O}{C_c}} = \sqrt{\frac{2 * 4,000 * 100}{Rs. 20}} = 200 \text{ units.}$$

(b) If the order size is 2,000 units at 2% discount:

$$\text{No. of orders} = \frac{\text{Annual Consumption}}{\text{Order size}} = \frac{4,000 \text{ units}}{2,000 \text{ units}} = 2$$

| | |
|---|---------------|
| Ordering cost is, 2 orders per year at Rs. 100 per order | Rs. 200 |
| Carrying cost of average inventory is $\frac{2,000 \text{ units}}{2} \times Rs. 20$ | <u>20,000</u> |
| Total cost per annum (excluding item cost) | 20,200 |
| Less: Annual cost when EOQ is applied | <u>4,000</u> |
| Incremental cost | <u>16,200</u> |
| Amount of discount to be received: 2% of (Rs. 200 x 4,000 units) | |
| = Rs. 16,000. | |

The offer is not acceptable, since the increase in total annual cost (Rs. 16,200) is more than the amount of quantity discount (Rs. 16,000). It will result in an additional material cost of Rs. 200 per annum.

Note: Calculation of $C_c = 10\%$ of Rs. 200 = 20

(c) If the order size is 4,000 units at 5% discount:

$$\text{No. of order} = \frac{4,000 \text{ units}}{4,000 \text{ units}} = 1.$$

| | |
|---|---------------|
| | Rs. |
| Ordering Cost is 1 order per year at Rs. 100 per order | 100 |
| Carrying cost of average inventory is $\frac{4,000 \text{ units}}{2} \times \text{Rs. } 20$ | <u>40,000</u> |
| Total cost per annum (excluding item cost) | 40,100 |
| Less: Annual cost when EOQ is applied | <u>4,000</u> |
| Incremental cost | <u>36,100</u> |

Amount of quantity discount: 5% x Rs. 200 x 4,000 units = Rs. 40,000.

This offer is acceptable because it will result in a saving of Rs. (40,000 – 36,100) or Rs. 3,900 per annum in material cost.

7.

Apportionment of Overhead

| Items of Overheads | Basis of Apportionment | Total Amount (Rs.) | Product x | Product y |
|--------------------------------|---|-----------------------|------------------|------------------|
| Insurance Charges | Average Inventory in value (1,000*Rs. 500) : (800*1,000) | 78,000 | 30,000 | 48,000 |
| Storage Cost | Storage space (1,000*2) : (800*1) | 1,40,000 | 1,00,000 | 40,000 |
| Packing and forwarding charges | Annual Sales in units (10,000*8,000) | 7,20,000 | 4,00,000 | 3,20,000 |
| Salesmen salary | Energy of salesman | 8,50,000 | 4,25,000 | 4,25,000 |
| Salesmen Commission | Annual Sales in Value (10,000*500) | 6,50,000 | 2,50,000 | 4,00,000 |
| Invoicing costs | Total number of invoices (2,500 : 2,000) | <u>4,50,000</u> | <u>2,50,000</u> | <u>2,00,000</u> |
| Total | | <u>28,80,000</u> | <u>14,55,000</u> | <u>14,33,000</u> |

Statement of Profitability

| | Product X | Product Y |
|--------------------------|----------------------------------|-------------------------------------|
| Annual sales | 10,000*500 = 50,00,000 | 8,000*1,000 = 80,00,000 |
| Less: cost of sales | 10,000*300 = 30,00,000 | 8,000*600 = 48,00,000 |
| Gross profit | 20,00,000 | 32,00,000 |
| Less: Other expenses | 14,55,000 | 14,33,000 |
| | 5,45,000 | 17,67,000 |
| Net profit %age of sales | (5,45,000/50,00,000)*100 = 10.9% | (17,67,000/80,00,000)*100 = 22.09 % |

| | Requirement 1 | Requirement 2 |
|---------|-----------------|-----------------|
| | Rs. | Rs. |
| Samsung | 1,26,620 | 1,17,900 |
| Akai | <u>63,180</u> | <u>69,100</u> |
| | <u>1,89,800</u> | <u>1,87,000</u> |

9. Differences between the two sets of accounts arises when separate books are maintained for both cost accounts and financial accounts.

The various reasons for disagreement of profits may be listed as below:

1. Items appearing only in financial accounts

The following items of income and expenditure are normally included in financial accounts and not in cost accounts. Their inclusion in cost accounts might lead to unwise managerial decisions. These items are:

- (i) Income:

- (a) Profit on sale of assets
- (b) Interest received
- (c) Dividend received
- (d) Rent receivable
- (e) Share transfer fees

- (ii) Expenditure:

- (a) Loss on sale of assets
- (b) Uninsured destruction of assets
- (c) Loss due to scrapping of plant and machinery
- (d) Preliminary expenses written off
- (e) Goodwill written off
- (f) Underwriting commission and debenture discount written off
- (g) Interest on mortgage and loans
- (h) Fines and penalties

2. Items appearing only in cost accounts

There are some items which are included in cost accounts but not in financial accounts. These are:

- (a) Notional interest on capital;
- (b) Notional rent on premises owned

3. Under or over-absorption of overhead

In cost accounts overheads are charged to production at pre-determined rates whereas in financial accounts actual amount of overhead is charged, the difference gives rise to under- or over-absorption; causing a difference in profits. When such under absorption or over absorption is charged or credited respectively to the Costing Profit and Loss Account, there shall be no need of reconciliation.

4. Different bases of stock valuation

In financial books, stocks are valued at cost or market price, whichever is lower. In cost books, however, stock of materials may be valued on FIFO or LIFO basis and work-in-

progress may be valued at prime cost or works cost. Differences in stock valuation may thus cause a difference between the two profits.

5. Depreciation

The amount of depreciation charged may be different in the two sets of books either because of the different methods of calculating depreciation or the rates adopted. In cost accounts, for instance, the straight line method may be adopted whereas in financial accounts it may be the diminishing balance method.

10. Reconciliation Statement

| | | Rs. | Rs. |
|-------|--|--------------|-----------------|
| | Loss as per costing Profit and Loss A/c | | 1,92,500 |
| Add: | 1. Works overhead under recovered as per costing records | 3,120 | |
| | 2. Loss of obsolescence in financial records | 5,700 | |
| | 3. Income tax provided in financial records | 37,300 | |
| | 4. Difference in value of Opening stock (64,000 – 62,600) | 1,400 | |
| | 5. Difference closing stock value (72,000 – 69,600) | 2,400 | |
| | 6. Preliminary expenses written off | 800 | |
| | 7. Provision for doubtful debts | <u>150</u> | <u>50,870</u> |
| | | | 2,26,270 |
| Less: | Administration overhead | 1,700 | |
| | Excess depreciation over-recovered in cost (12,500 – 11,200) | 1,300 | |
| | Interest received | 5,000 | |
| | Bank interest credited in financial book | 750 | |
| | Stores adjustment | 475 | |
| | Interest charged only in cost accounts | <u>6,000</u> | <u>15,225</u> |
| | Loss as per financial records | | <u>2,28,145</u> |

11. Cost ledger control account

| | Rs. | | Rs. |
|--------------------------------|-----------------|-------------------------------------|-----------------|
| Sales A/c | 4,10,000 | 1.5.2007 Balance b/f | 3,02,000 |
| Capital under construction A/c | 50,150 | Stores ledger Control A/c–Purchases | 42,700 |
| Balance c/f | 2,37,500 | Wages control A/c | 1,24,000 |
| | | Production overhead A/c | 1,52,350 |
| | | WIP A/c – Royalty | 2,150 |
| | | Selling overhead A/c | 22,000 |
| | | Profit | <u>52,450</u> |
| | <u>6,97,650</u> | | <u>6,97,650</u> |

Stores ledger control account

| | Rs. | | Rs. |
|-------------------------------------|-----------------|---------------------------------|-----------------|
| 1.5.2007 Balance b/f | 85,400 | WIP control A/c | 63,400 |
| Cost ledger control A/c – Purchases | 42,700 | Production overhead control A/c | 1,450 |
| | | Capital under construction A/c | 7,650 |
| | | 31.5.2007 Balance | <u>55,600</u> |
| | <u>1,28,100</u> | | <u>1,28,100</u> |

Wages control A/c

| | Rs. | | Rs. |
|-------------------------|-----------------|---------------------------------|-----------------|
| Cost ledger control A/c | 1,24,000 | Capital under construction A/c | 12,500 |
| | | Production overhead control A/c | 35,750 |
| | | WIP control A/c | <u>7,550</u> |
| | <u>1,24,000</u> | | <u>1,24,000</u> |

Production overhead control account

| | Rs. | | Rs. |
|-------------------------|-----------------|--|-----------------|
| Stores ledger A/c | 1,450 | Capital under construction A/c | 30,000 |
| Wages control A/c | 35,750 | WIP control A/c – Absorption (balancing figure) | 1,52,000 |
| Cost ledger control A/c | 1,52,350 | Costing Profit and Loss A/c (under absorption) | <u>7,550</u> |
| | <u>1,89,550</u> | | <u>1,89,550</u> |

Work in progress control account

| | Rs. | | Rs. |
|-----------------------------------|-----------------|--|-----------------|
| 1.5.07 Balance b/f | 1,67,350 | Finished goods control A/c (balancing figure) | 2,81,300 |
| Stores ledger A/c – issues | 63,400 | 31.5.07 Balance c/f | 1,79,350 |
| Wages control A/c | 75,750 | | |
| Production overhead absorbed | 1,52,000 | | |
| Cost ledger control A/c – Royalty | <u>2,150</u> | | |
| | <u>4,60,650</u> | | <u>4,60,650</u> |

Finished goods control account

| | Rs. | | Rs. |
|--------------------|-----------------|---------------------|-----------------|
| 1.5.07 Balance b/f | 49,250 | Cost sales A/c | 3,28,000 |
| WIP control A/c | <u>2,81,300</u> | 31.5.07 Balance c/f | <u>2,550</u> |
| | <u>3,30,550</u> | | <u>3,30,550</u> |

Capital under construction account

| | Rs. | | Rs. |
|------------------------------|---------------|-------------------------|---------------|
| Stores ledger control A/c | 7,650 | Cost ledger control A/c | 50,150 |
| Wages control A/c | 12,500 | | |
| Production overhead absorbed | <u>30,000</u> | | |
| | <u>50,150</u> | | <u>50,150</u> |

Sales account

| | Rs. | | Rs. |
|-----------------------------|----------|-------------------------|----------|
| Costing Profit and Loss A/c | 4,10,000 | Cost ledger control A/c | 4,10,000 |

Cost of sales A/c

| | Rs. | | Rs. |
|--------------------|----------|-----------------------------|----------|
| Finished goods A/c | 3,28,000 | Costing Profit and Loss A/c | 3,28,000 |

Statement of Evaluation

| | | Amount (Rs.) | Amount (Rs.) |
|---|---------------------|-----------------|-----------------|
| Abnormal loss (500 units) | | | |
| Material | 500 units × Rs. 4 | 2,000 | |
| Labour | 350 units × Re.1 | 350 | |
| Production overheads | 350 units × Rs. 2 | 700 | 3,050 |
| Cost of units transferred | | | |
| Opening WIP (2,250 units) | | 11,250 | |
| Add: Cost incurred | | | |
| Labour | 900 units × Re. 1 | 900 | |
| Production overheads | 900 units × Rs. 2 | 1,800 | 2,700 |
| Units introduced & completed (17,250 units × Rs.7) | | | 1,20,750 |
| Total cost of 19,500 units transferred to next process | | | 1,34,700 |
| Closing WIP (2,500 units) | | | |
| Material | 2,500 units × Rs.4 | 10,000 | |
| Labour | 2,000 units × Re.1 | 2,000 | |
| Production overheads | 2,000 units × Rs. 2 | 4,000 | 16,000 |

Process I Account

| Particulars | Units | Rs. | Particulars | Units | Rs. |
|-------------------------|---------------|-----------------|---------------------------|---------------|-----------------|
| To Opening WIP | 2,250 | 11,250 | By Normal Loss | 2,500 | 7,500 |
| To Material | 22,750 | 88,500 | By Unit completed and | | |
| To Wages | | 20,500 | transferred to Process II | 19,500 | 1,34,700 |
| To Production overheads | | 41,000 | By Abnormal loss | 500 | 3,050 |
| | | | By Closing WIP | 2,500 | 16,000 |
| | <u>25,000</u> | <u>1,61,250</u> | | <u>25,000</u> | <u>1,61,250</u> |

13. (i) Statement of profitability of an Oil Mill (after carrying out further processing) for the quarter ending 31st March 2007.

| Products name | Sales Value after further processing | Share of Joint cost | Additional processing cost | Total cost after processing | Profit (loss) |
|---------------|--------------------------------------|---------------------|----------------------------|-----------------------------|---------------|
| ACH | 1,72,500 | 98,667 | 43,000 | 1,41,667 | 30,833 |
| BCH | 15,000 | 19,733 | 9,000 | 28,733 | (13,733) |
| CSH | 6,000 | 4,933 | -- | 4,933 | 1,067 |
| DSH | <u>45,000</u> | <u>24,667</u> | <u>1,500</u> | <u>26,167</u> | <u>18,833</u> |
| | <u>2,38,500</u> | <u>1,48,000</u> | <u>53,500</u> | <u>2,01,500</u> | <u>37,000</u> |

(ii) Statement of profitability at the split off point

| Products' name | Selling price of split off | Output in units | Sales value at split off point | share of joint cost | profit at split off point |
|----------------|----------------------------|-----------------|--------------------------------|---------------------|---------------------------|
| ACH | 15 | 8,000 | 1,20,000 | 98,667 | 21,333 |
| BCH | 6 | 4,000 | 24,000 | 19,733 | 4,267 |
| CSH | 3 | 2,000 | 6,000 | 4,933 | 1,067 |
| DSH | 7.50 | 4,000 | <u>30,000</u> | <u>24,667</u> | <u>5,333</u> |
| | | | <u>1,80,000</u> | <u>1,48,000</u> | <u>32,000</u> |

Note: Share of Joint Cost has been arrived at by considering the sales value at split off point.

14. (a) Fixed costs are costs which do not change in total quantum till the time the capacity is reached. Hence if the production is less than the capacity, the fixed cost per unit do not remain as budgeted. Hence, we can say that fixed costs are variable in unit.
- (b) The most appropriate basis for apportioning is "The value of the machinery in each cost centre" since the number of machines or the floor area or the operating hours do not give any indication of the value on which insurance amounts and premiums are decided upon.
- (c) Since overheads are over absorbed, the budgeted quantum shall be Rs. 24,000 more than what has actually been incurred. Hence Budgeted Overheads for 1,00,000 labour hours will be Rs. 24,000 + 5,16,000 = Rs. 5,40,000 or Rs. 5.40 per labour hour
- (d) The Weighted Average method is most suitable at times when prices fluctuate widely because this method incorporates fluctuations in prices by identifying a weighted average price rather than individual prices as used under both FIFO and LIFO.

15.

| Minda Corporation Limited | | | | |
|---|--------------|-----------------|--------------------------|-----------------|
| Contract account for the year ended 31 st March 2007 | | | | |
| Dr. | | Rs. | Cr. Rs. | |
| To Materials purchased | | 1,00,000 | By Work-in-progress c/d | |
| To Wages paid | 45,000 | | Work certified | 2,00,000 |
| Add: Wages accrued | <u>5,000</u> | 50,000 | Work uncertified | 15,000 |
| To General expenses | | 10,000 | Effect of escalation | |
| To Depreciation of plant | | 5,000 | clause | <u>5,000</u> |
| To Notional profit c/d | | <u>80,000</u> | By Materials in hand c/d | <u>25,000</u> |
| | | <u>2,45,000</u> | | <u>2,45,000</u> |
| To Profit and loss A/c | | 20,000 | By Notional profit b/d | 80,000 |
| To Work-in-progress c/d | | | | |
| (Profit in reserve) | | <u>60,000</u> | | |
| | | <u>80,000</u> | | <u>80,000</u> |
| 1.4.2007 | | | 1.4.2007 | |
| To Work-in-progress b/d | | | By Work-in-progress b/d | 60,000 |
| Work certified | 2,00,000 | | (profit in reserve) | |
| Work uncertified | 15,000 | | | |

| | | |
|-----------------------------|--------------|----------|
| Effect of escalation clause | | |
| | <u>5,000</u> | 2,20,000 |
| To Materials in hand b/d | | 25,000 |

Working Notes:

(i) Ascertainment of effect of escalation clause:

| | Total increase 25% Rs. | Increase up to 5% Rs. | Increase beyond 5% Rs. |
|---|------------------------------|-----------------------------|------------------------------|
| Materials: | | | |
| Effect of increased price | | | |
| $(Rs. 1,00,000 - Rs. 25,000) \times \frac{25}{125}$ | 15,000 | 3,000 | 12,000 |
| Wages: | | | |
| Effect of increased wage rates: | | | |
| $Rs. 50,000 \times \frac{25}{125}$ | 10,000 | 2,000 | 8,000 |
| Total increase | 25,000 | 5,000 | 20,000 |

Increase in value of work done (certified & uncertified)

to date: 25% of Rs. 20,000 = Rs. 5,000

(ii) Profit to be transferred to the profit and loss account:

Since the contract is between 1/4 and 1/2 complete, one-third of the notional profit, reduced by the proportion of cash received to work certified, is to be transferred as below:

$$= \frac{1}{3} \times \text{Notional profit} \times \frac{\text{Cash received}}{\text{Work certified}}$$

$$= \frac{1}{3} \times Rs. 80,000 \times \frac{Rs. 1,50,000}{Rs. 2,00,000} = Rs. 20,000.$$

16.

Output and losses

| | Process X | Process Y |
|----------------------------|-----------|-----------|
| | Units | Units |
| Output | 1,750 | 2,800 |
| Normal loss (10% of input) | 200 | 300 |
| Abnormal loss | 50 | — |
| Abnormal gain | — | (100) |
| | 2,000 | 3,000* |

* 1,750 units from Process X + 1,250 units input to process.

Cost per unit of output and losses

| | Process X | Process Y |
|------------------|-----------|------------------|
| | Rs. | Rs. |
| Cost of input | | |
| – Material | 8,100 | 1,900 |
| – From process X | — | (1,750 × Rs. 10) |
| | | 17,500 |

| | | | | |
|---------------------------------|--------------------|--------|---------------------|--------|
| – Labour | | 4,000 | | 10,000 |
| – Overhead | (150% × Rs. 4,000) | 6,000 | (120% × Rs. 10,000) | 12,000 |
| | | 18,100 | | 41,400 |
| Less scrap value of normal loss | (200 × Rs. 0.50) | (100) | (300 × Rs. 3) | (900) |
| | | 18,000 | | 40,500 |
| Expected output | | | | |
| 90% of 2,000 | | 1,800 | | |
| 90% of 3,000 | | | | 2,700 |
| Cost per unit | | | | |
| Rs. 18,000 ÷ 1,800 | | Rs. 10 | | |
| Rs. 40,500 ÷ 2,700 | | | | Rs. 15 |
| Total cost of output and losses | | | | |

| | Process X | | Process Y | |
|-------------------------------|---------------|------------------|-----------|----------------|
| | Rs. | | Rs. | |
| Output (1,750 × Rs. 10) | 17,500 | (2,800 × Rs. 15) | | 42,000 |
| Normal loss (200 × Rs. 0.50)* | 100 | (300 × Rs. 3)* | | 900 |
| Abnormal loss (50 × Rs. 10) | <u>500</u> | | | <u>–</u> |
| | 18,100 | | | <u>42,900</u> |
| Abnormal gain | <u>–</u> | (100 × Rs. 15) | | <u>(1,500)</u> |
| | <u>18,100</u> | | | <u>41,400</u> |

* Normal loss is valued at scrap value only.

Complete accounts

| Process X Account | | | | | |
|-------------------------|--------------|---------------|-------------------------|--------------|---------------|
| | Units | Rs. | | Units | Rs. |
| Direct material | 2,000 | 8,100 | Scrap A/c (normal loss) | 200 | 100 |
| Direct labour | | 4,000 | Process Y A/c | 1,750 | 17,500 |
| Production overhead A/c | | 6,000 | Abnormal loss A/c | 50 | 500 |
| | <u>2,000</u> | <u>18,100</u> | | <u>2,000</u> | <u>18,100</u> |

| Process Y Account | | | | | |
|---------------------|--------------|---------------|-------------------------|--------------|---------------|
| | Units | Rs. | | Units | Rs. |
| Direct materials | | | | | |
| From process X | 1,750 | 17,500 | Scrap A/c (normal loss) | 300 | 900 |
| Added materials | 1,250 | 1,900 | Finished goods A/c | 2,800 | 42,000 |
| Direct labour | | 10,000 | | | |
| Production overhead | | 12,000 | | | |
| | | 41,400 | | | |
| Abnormal gain | <u>100</u> | <u>1,500</u> | | <u>–</u> | <u>–</u> |
| | <u>3,100</u> | <u>42,900</u> | | <u>3,100</u> | <u>42,900</u> |

Abnormal Loss Account

| | Rs. | | Rs. |
|----------------------|------------|---|------------|
| Process X (50 units) | 500 | Scrap A/c: sale of scrap of extra loss (50 units) | 25 |
| | | Profit and loss A/c | 475 |
| | <u>500</u> | | <u>500</u> |

Abnormal Gain Account

| | Rs. | | Rs. |
|---|--------------|-------------------------------------|--------------|
| Scrap A/c (loss of scrap revenue due to abnormal gain, 100 units × Rs. 3) | 300 | Process Y abnormal gain (100 units) | 1,500 |
| Profit and Loss A/c | 1,200 | | |
| | <u>1,500</u> | | <u>1,500</u> |

Scrap Account

| | Rs. | | Rs. |
|-------------------------------|--------------|-------------------------------|--------------|
| Scrap value of normal loss | | Cash A/c – cash received | |
| Process X (200 units) | 100 | Loss in process X (250 units) | 125 |
| Process Y (300 units) | 900 | Loss in process Y (200 units) | 600 |
| Abnormal loss A/c (process X) | 25 | Abnormal gain A/c (process Y) | 300 |
| | <u>1,025</u> | | <u>1,025</u> |

Production Overhead Account

| | Rs. | | Rs. |
|---|---------------|---------------|---------------|
| Overhead incurred | 17,800 | Process X A/c | 6,000 |
| Over-absorbed overhead A/c (or Profit & Loss A/c) | 200 | Process Y A/c | 12,000 |
| | <u>18,000</u> | | <u>18,000</u> |

17. (a) Purpose of Cost Audit: The purpose of cost audit is to examine whether the methods laid down for ascertaining cost and the decisions are being properly implemented and whether the Cost Accounting plan has been adhered to or not.

Broadly, the purposes of cost audit can be classified as : (i) protective, and (ii) constructive.

Protective purpose of Cost Audit: Under this, cost audit aims at examining that there is no undue wastage or losses and the costing system brings out the correct and realistic cost of production or processing. The benefit of this protective function is derived by the organisation, its owners and consumers.

Constructive purpose of Cost Audit: Cost audit has a constructive purpose as well. Cost auditor plays a constructive role by providing management of the company with information useful in regulating production; choosing economical methods of operation, reducing operations cost and re-formulating plans etc., on the basis of his findings during the course of cost audit.

- (b) Cost reduction may be defined as the achievement of real and permanent reduction in the unit cost of goods manufactured or services rendered without impairing their suitability for the use intended or diminution in the quality of the product.

Advantages of Cost reduction

The advantages accruing from cost reduction programme can be discussed under following three heads:

- (a) In so far as an individual company is concerned, cost reduction results in profit improvement. The more the profits, the more stable the company becomes. It enhances the share value, improves investment opportunities and facilitates collection of capital.

- (b) Society will be benefited by reduced prices, which may be possible, by savings from cost reduction programmes. Competitive position will improve and the industry as a whole will strive to improve productivity and pass on the advantage of such programmes to the society. Workers and staff of the industry may also be benefited throughout increased wages and improved welfare amenities.
- (c) The country also stands to gain immensely by cost reduction programme. Industry will be able to maintain the international parity in prices of exportable commodities and consequential increase in export will result in increased foreign exchange savings. Also internal revenue will increase through more tax revenues.
18. (a) **Uniform Costing:** Uniform costing is not a distinct method of costing. In fact, when several undertakings start using the same costing principles and/or practices they are said to be following uniform costing. The basic idea behind uniform costing is that the different concerns in an industry should adopt a common method of costing and apply uniformly the same principles and techniques for better cost comparison and common good. The principles and methods of completion, analysis, apportionment and absorption of overheads differ from one concern to the other in the same industry; but if a common or uniform pattern is adopted by all, it helps mutually in cost control and cost reduction. Therefore, it is necessary that a uniform method of costing should be adopted by the member unit of an industry.

Limitations of uniform costing: For the answer of this question refer to Chapter 11 of Cost Accounting book of the Institute.

- (b) The following are the points of difference between a Production Account and a Cost Sheet:
- (i) Production Account is based on double entry system whereas Cost Sheet is not based on double entry system.
 - (ii) Production Account consists of two parts. The first part shows cost of the components and total production cost. The second part shows the cost of sales and profit for the period. Cost Sheet presents the elements of costs in a classified manner and the cost is ascertained at different stages such as prime cost; works cost; cost of production; cost of goods sold; cost of sales and total cost.
 - (iii) Production Account shows the cost in aggregate and thus facilitates comparison with other financial accounts. Cost Sheet shows the cost in detail and analytical manner, which facilitates comparison of cost for the purpose of cost control.
 - (iv) Production Account is not useful for preparing tenders or quotations. Estimated cost sheets can be prepared on the basis of actual cost sheets and these are useful for preparing tenders or quotations.

19.

| Details | Department | | |
|-------------------|------------|-------|-------|
| | A | B | C |
| | Rs. | Rs. | Rs. |
| Overhead incurred | 2,200 | 1,500 | 2,500 |
| Overhead absorbed | 2,000 | 1,400 | 2,250 |
| Over-absorbed | 200 | | |
| Under-absorbed | | 100 | 250 |

Treatment of Over-absorbed/Under-absorbed Overheads

Department A: as the over-absorbed overhead is 10%, it is desirable to apply supplementary overhead rate and correspondingly give credit to the respective jobs.

Department B: as the under-absorbed overhead is less than 10%, it should be transferred to the current year's profit and loss account.

Department C: as the under-absorbed overhead is 10%, it is appropriate to apply supplementary overhead rate and give debit to the respective jobs.

The preliminary enquiries should be made on the lowest capacity utilization (50%) of Department C. The reasons for this underutilized capacity should be further segregated into controllable and uncontrollable. Department B is also not able to fully utilize the capacity. It is advisable to consider this aspect in formulating next year's budgets by eliminating the unutilized capacity.

20. The following are the various characteristics of Job, Batch and Contract Costing:
1. Job Costing is an appropriate method to use in cases where individual jobs are of significance or are customised as per the order. In such cases there is a need to identify the cost of such unique jobs. Thus, time sheet / log book labour details and material usage from material requisitions shall be used to assign labour and material costs to the respective jobs. The cost of audits is usually accumulated on a job-costing basis, as is the cost of servicing a motorcar.
 2. In Batch Costing, large numbers of identical products are accumulated as a 'batch', to which costs are assigned in much the same way as costs are assigned to a particular job in Job Costing. Batch Costing is of use in cases where the individual unit of production is not costly enough or is sufficiently differentiated from all other units of production. Shoes or Picture Tubes can be costed on batch costing lines.
 3. Contract Costing is used in cases where individual cost unit is large, and its completion is liable to be extended over a number of accounting periods. The determination of period profits for reporting purposes is a complex process when Contract Costing is being used. The proportion of direct costs to the total costs is usually larger in contract costing when compared with the other specific order costing methods. This form of costing is appropriate in the construction of power stations, flyovers etc.
21. (a) The following are the points of difference between a Production Account and a Cost Sheet:
- (i) Production Account is based on double entry system whereas Cost Sheet is not based on double entry system.
 - (ii) Production Account consists of two parts. The first part shows cost of the components and total production cost. The second part shows the cost of sales and profit for the period. Cost Sheet presents the elements of costs in a classified manner and the cost is ascertained at different stages such as prime cost; works cost; cost of production; cost of goods sold; cost of sales and total cost.
 - (iii) Production Account shows the cost in aggregate and thus facilitates comparison with other financial accounts. Cost Sheet shows the cost in detail and analytical manner, which facilitates comparison of cost for the purpose of cost control.
 - (iv) Production Account is not useful for preparing tenders or quotations. Estimated cost sheets can be prepared on the basis of actual cost sheets and these are useful for preparing tenders or quotations.
- (b) Controllable costs and uncontrollable costs: Costs which can be influenced by the action of a specified person in an organisation are known as controllable costs. Costs which remains unaffected by the action of such a person are termed as uncontrollable costs. In a business organisation heads of each responsibility centre are responsible to control costs. Costs which they are able to control are known as controllable and includes material; labour and direct expenses. Costs which they fail to control includes fixed costs and all allocated costs.

It may be noted that controllable and uncontrollable cost concepts are related to the authority of a person in the organisation. An expenditure which may be uncontrollable by

one person may be controllable by another. Moreover, in the long run all costs may be controllable.

- (c) Bin Card and Stores Ledger: Bin Card is a quantitative record of stores receipt, issue and balance and is kept by store keeper for each item of stores.

Stores ledger keeps quantitative and monetary value records of stores receipt, issue and balance and is prepared by the Cost Accounting Department.

- (d) Explicit Costs and Implicit Costs: Product cost is explicit cost. Opportunity cost is an example of implicit cost. Imputed costs (notional costs) are an example of implicit cost.

- (e) Cost Driver: A cost driver is a characteristic of an event or activity that results in the increase of costs. In activity based costing the most significant cost drivers are identified.

Activity cost pool: It is a measure of the frequency and intensity of demand placed on activities by cost objects. It is used to assign activity cost-to-cost objects.

PAPER – 4B : FINANCIAL MANAGEMENT

1. Theta Company has outstanding a 14 per cent coupon bond with 3 years to maturity. Interest payments are made semi-annually. Assume a face value of Rs. 100.
 - (a) (i) If the market price of the bond is Rs. 104, what is the yield to maturity? (ii) If it were Rs. 97, what would be the yield? (iii) Calculate the yield, if it were Rs. 100?
 - (b) (i) If the bond's yield is 12 per cent, what would be its price? (ii) Similarly, calculate its price if the yield is 15 per cent? and (iii) If it is 14 per cent?
 - (c) Instead of a coupon bond, suppose it were a zero coupon, pure discount instrument. If the yield were 14 per cent, what would be the market price? (Assume semiannual compounding).
2. Alpha Stove Company is considering a new product line to supplement its range line. It is anticipated that the new product line will involve cash investments of Rs. 7,00,000 at time 0 and Rs. 10,00,000 in year 1. After-tax cash inflows of Rs. 2,50,000 are expected in year 2, Rs. 3,00,000 in year 3, Rs. 3,50,000 in year 4 and Rs. 4,00,000 each year thereafter through year 10. Although the product line might be viable after year 10, the company prefers to be conservative and end all calculations at that time.
 - (a) If the required rate of return is 15 per cent, what is the net present value of the project? Is it acceptable?
 - (b) What would be the case if the required rate of return were 10 per cent?
 - (c) What is its internal rate of return?
 - (d) What is the project's payback period?
3. Beta Cooker Company is evaluating three investment situations: (1) produce a new line of aluminum skilllets, (2) expand its existing cooker line to include several new sizes, and (3) develop a new, higher-quality line of cookers. If only the project in question is undertaken, the expected present values and the amounts of investment required are:

| Project | Investment required | Present value of Future Cash-Flows |
|---------|---------------------|------------------------------------|
| | Rs. | Rs. |
| 1 | 2,00,000 | 2,90,000 |
| 2 | 1,15,000 | 1,85,000 |
| 3 | 2,70,000 | 4,00,000 |

If projects 1 and 2 are jointly undertaken, there will be no economies; the investments required and present values will simply be the sum of the parts. With projects 1 and 3, economies are possible in investment because one of the machines acquired can be used in both production processes. The total investment required for projects 1 and 3 combined is Rs. 4,40,000. If projects 2 and 3 are undertaken, there are economies to be achieved in marketing and producing the products but not in investment. The expected present value of future cash flows for projects 2 and 3 is Rs. 6,20,000. If all three projects are undertaken simultaneously, the economies noted will still hold. However, a Rs. 1,25,000 extension on the plant will be necessary, as space is not available for all three projects. Which project or projects should be chosen?

4. Calci Company and Zion Calculators, Inc., are identical except for capital structures. Calci has 50 per cent debt and 50 per cent equity, whereas Zion has 20 per cent debt and 80 per cent equity. (All percentages are in market-value terms). The borrowing rate for both companies is 8 per cent in a no-tax world, and capital markets are assumed to be perfect.
 - (a) (i) If you own 2 per cent of the stock of Calci, what is your return if the company has net operating income of Rs. 3,60,000 and the overall capitalisation rate of the company, K_0 is 18 per cent? (ii) What is the implied required rate of return on equity?

- (b) Zion has the same net operating income as Calci. (i) What is the implied required equity return of Zion? (ii) Why does it differ from that of Calci?
5. Beta Company has earnings before interest and taxes of Rs. 30,00,000 and a 40 per cent tax rate. Its required rate of return on equity in the absence of borrowing is 18 per cent.
- (a) In the absence of personal taxes, what is the value of the company in an MM world (i) with no leverage? (ii) with Rs. 40,00,000 in debt? (3) with Rs. 70,00,000 in debt?
- (b) Personal as well as corporate taxes now exist. The marginal personal tax rate on common stock income is 25 per cent, and the marginal personal tax rate on debt income is 30 per cent. Determine the value of the company for each of the three debt alternatives in part (a). Why do your answers differ?
6. RPS Company presently has Rs. 36,00,000 in debt outstanding bearing an interest rate of 10 per cent. It wishes to finance a Rs. 40,00,000 expansion programme and is considering three alternatives: additional debt at 12 per cent interest, preferred stock with an 11 per cent dividend, and the sale of common stock at Rs. 16 per share. The company presently has 8,00,000 shares of common stock outstanding and is in a 40 per cent tax bracket.
- (a) If earnings before interest and taxes are presently Rs. 15,00,000, what would be earnings per share for the three alternatives, assuming no immediate increase in profitability?
- (b) Develop an indifference chart for these alternatives. What are the approximate indifference points? To check one of these points, what is the indifference point mathematically between debt and common?
- (c) Which alternative do you prefer? How much would EBIT need to increase before the next alternative would be best?
7. ABC Company sells plumbing fixtures on terms of 2/10, net 30. Its financial statements over the last 3 years are as follows:

| | 2004 | 2005 | 2006 |
|-----------------------|------------------|------------------|------------------|
| | Rs. | Rs. | Rs. |
| Cash | 30,000 | 20,000 | 5,000 |
| Accounts receivable | 2,00,000 | 2,60,000 | 2,90,000 |
| Inventory | 4,00,000 | 4,80,000 | 6,00,000 |
| Net fixed assets | <u>8,00,000</u> | <u>8,00,000</u> | <u>8,00,000</u> |
| | <u>14,30,000</u> | <u>15,60,000</u> | <u>16,95,000</u> |
| | Rs. | Rs. | Rs. |
| Accounts payable | 2,30,000 | 3,00,000 | 3,80,000 |
| Accruals | 2,00,000 | 2,10,000 | 2,25,000 |
| Bank loan, short-term | 1,00,000 | 1,00,000 | 1,40,000 |
| Long-term debt | 3,00,000 | 3,00,000 | 3,00,000 |
| Common stock | 1,00,000 | 1,00,000 | 1,00,000 |
| Retained earnings | <u>5,00,000</u> | <u>5,50,000</u> | <u>5,50,000</u> |
| | <u>14,30,000</u> | <u>15,60,000</u> | <u>16,95,000</u> |
| | Rs. | Rs. | Rs. |
| Sales | 40,00,000 | 43,00,000 | 38,00,000 |
| Cost of goods sold | 32,00,000 | 36,00,000 | 33,00,000 |
| Net profit | 3,00,000 | 2,00,000 | 1,00,000 |

Analyse the company's financial condition and performance over the last 3 years. Are there any problems?

8. Consider the balance sheet of Sona Company at December 31 (in thousands). The company has received a large order and anticipates the need to go to its bank to increase its borrowings. As a result, it has to forecast its cash requirements for January, February and March. Typically, the company collects 20 per cent of its sales in the month of sale, 70 per cent in the subsequent month, and 10 per cent in the second month after the sale. All sales are credit sales.

| | | | |
|---------------------|--------------|------------------------------|--------------|
| | Rs. | | Rs. |
| Cash | 50 | Accounts payable | 360 |
| Accounts receivable | 530 | Bank loan | 400 |
| Inventories | <u>545</u> | Accruals | <u>212</u> |
| Current assets | 1,125 | Current liabilities | 972 |
| Net fixed assets | 1,836 | Long-term debt | 450 |
| | | Common stock | 100 |
| | | Retained earnings | <u>1,439</u> |
| Total assets | <u>2,961</u> | Total liabilities and equity | <u>2,961</u> |

Purchases of raw materials are made in the month prior to the sale and amount to 60 per cent of sales in the subsequent month. Payments for these purchases occur in the month after the purchase. Labour costs, including overtime, are expected to be Rs. 1,50,000 in January, Rs. 2,00,000 in February, and Rs. 1,60,000 in March. Selling, administrative, taxes, and other cash expenses are expected to be Rs. 1,00,000 per month for January through March. Actual sales in November and December and projected sales for January through April are as follows (in thousands):

| | | | | | |
|----------|-----|----------|-------|-------|-----|
| | Rs. | | Rs. | | Rs. |
| November | 500 | January | 600 | March | 650 |
| December | 600 | February | 1,000 | April | 750 |

On the basis of this information:

- Prepare a cash budget for the months of January, February, and March.
 - Determine the amount of additional bank borrowings necessary to maintain a cash balance of Rs. 50,000 at all times.
 - Prepare a pro forma balance sheet for March 31.
9. Farhan Corporation presently gives terms of net 30 days. It has Rs. 6 crores in sales, and its average collection period is 45 days. To stimulate demand, the company may give terms of net 60 days. If it does instigate these terms, sales are expected to increase by 15 per cent. After the change, the average collection period is expected to be 75 days, with no difference in payment habits between old and new customers. Variable costs are Rs. 0.80 for every Re. 1.00 of sales, and the company's required rate of return on investment in receivables is 20 per cent. Should the company extend its credit period? (Assume a 360 days year).
10. The Disa Corporation has just acquired a large account. As a result, it needs an additional Rs. 75,000 in working capital immediately. It has been determined that there are three feasible sources of funds:
- Trade credit: The company buys about Rs. 50,000 of materials per month on terms of 3/30, net 90. Discounts are taken.

- (b) Bank loan: The firm's bank will lend Rs. 1,00,000 at 13 per cent. A 10 per cent compensating balance will be required, which otherwise would not be maintained by the company.
- (c) A factor will buy the company's receivables (Rs. 1,00,000 per month), which have a collection period of 60 days. The factor will advance up to 75 per cent of the face value of the receivables at 12 per cent on an annual basis. The factor will also charge a 2 per cent fee on all receivables purchased. It has been estimated that the factor's services will save the company a credit department expense and bad-debt expenses of Rs. 1,500 per month.

On the basis of annual percentage cost, which alternative should the company select?

11. The Dolce Company purchases raw materials on terms of 2/10, net 30. A review of the company's records by the owner, Mr. Gupta, revealed that payments are usually made 15 days after purchases are received. When asked why the firm did not take advantage of its discounts, the accountant, Mr. Ram, replied that it cost only 2 per cent for these funds, whereas a bank loan would cost the company 12 per cent.
 - (a) What mistake is Ram making?
 - (b) What is the real cost of not taking advantage of the discount?
 - (c) If the firm could not borrow from the bank and was forced to resort to the use of trade credit funds, what suggestion might be made to Ram that would reduce the annual interest cost?
12. Freshair Company is a distributor of air filters to retail stores. It buys its filters from several manufacturers. Filters are ordered in lot sizes of 1,000 and each order costs Rs. 40 to place. Demand from retail stores is 20,000 filters per month, and carrying cost is Rs. 0.10 a filter per month.
 - (a) What is the optimal order quantity with respect to so many lot sizes?
 - (b) What would be the optimal order quantity if the carrying cost were Rs. 0.05 a filter per month?
 - (c) What would be the optimal order quantity if ordering costs were Rs. 10?
13. Differentiate between the following:
 - (a) Profit maximization and Wealth maximization
 - (b) Functions of Finance manager and Functions of an Accountant
 - (c) Global Depository Receipts and American Depository Receipts
 - (d) Debt Securitisation and Bridge Finance.
14. Explain, in brief the following:
 - (a) Need for Social Cost Benefit Analysis
 - (b) Venture Capital Financing
 - (c) Factoring
 - (d) Profitability Index.
15. Write short notes on the following:
 - (a) Inter-relationship between Investment, Financing and Dividend Decisions
 - (b) William J. Baumal vs Miller- Orr Cash Management Model
 - (c) Importance of Funds Flow Statement
 - (d) Pecking Order Theory of Capital Structure

SUGGESTED ANSWERS/HINTS

1. (a) (i) The yield to maturity, r , can be found by the following equation:

$$P = \frac{C/2}{1 + \frac{r}{2}} + \frac{C/2}{(1 + \frac{r}{2})^2} + \dots + \frac{C/2}{(1 + \frac{r}{2})^{2n}} + \frac{Rs. 100}{(1 + \frac{r}{2})^{2n}}$$

Putting in the required values, the yield to maturity is 12.36 per cent. The yield is less than the coupon rate when the bond trades at a price premium above its face value.

- (ii) The yield here is 15.72 per cent. Yield is more than the coupon rate for a bond trading at a discount.
- (iii) Whenever the market price equals the face value, yield equals the coupon rate, 14 per cent in this case.
- (b) (i) This can be solved again by using the above equation and solving for price, we find it to be Rs. 104.92.
- (ii) In this case, price is found to be Rs. 97.65.
- (iii) Price equals the face value of Rs. 100 when yield equals the coupon rate.

| 2. (a) | Year | Cash flow Rs. | Discount Factor (15%) | Present value Rs. |
|--------|------|------------------|-----------------------|----------------------|
| | 0 | (7,00,000) | 1.00000 | (7,00,000) |
| | 1 | (10,00,000) | .86957 | (8,69,570) |
| | 2 | 2,50,000 | .75614 | 1,89,035 |
| | 3 | 3,00,000 | .65752 | 1,97,256 |
| | 4 | 3,50,000 | .57175 | 2,00,113 |
| | 5-10 | 4,00,000 | 2.1638* | <u>8,65,520</u> |
| | | | Net present value | = <u>(1,17,646)</u> |

*5.0188 for 10 years – 2.8550 for 4 years.

As the net present value is negative, the project is unacceptable.

- (b) Similarly, NPV at 10% discount rate can be computed following the same method as given in part (a). Since NPV = Rs.2,51,849 i.e. positive, hence the project would be acceptable.

$$(c) \text{ IRR} = 10\% + \frac{2,51,849}{3,69,495} \times 5$$

$$= 10\% + 3.4080$$

$$\text{IRR} = 13.40\%$$

- (d) Payback period = 6 years:

$$-Rs. 7,00,000 - Rs. 10,00,000 + Rs. 2,50,000 + Rs. 3,00,000 + Rs. 3,50,000 + Rs. 4,00,000 + Rs. 4,00,000 = 0$$

| 3. | Project | Investment Required Rs. | Present value of Future Cash Flows Rs. | Net Present value Rs. |
|----|---------|----------------------------|--|--------------------------|
| | 1 | 2,00,000 | 2,90,000 | 90,000 |
| | 2 | 1,15,000 | 1,85,000 | 70,000 |
| | 3 | 2,70,000 | 4,00,000 | 1,30,000 |

| | | | |
|------------|----------|----------|----------|
| 1 and 2 | 3,15,000 | 4,75,000 | 1,60,000 |
| 1 and 3 | 4,40,000 | 6,90,000 | 2,50,000 |
| 2 and 3 | 3,85,000 | 6,20,000 | 2,35,000 |
| 1, 2 and 3 | 6,80,000 | 9,10,000 | 2,30,000 |

Advise: Projects 1 and 3 should be chosen, as they provide the highest net present value.

| | |
|-------------------------------|------------------|
| 4. (a) (i) | Rs. |
| Net operating income | 3,60,000 |
| ÷ Overall capitalisation rate | <u>.18</u> |
| Total value of firm | 20,00,000 |
| Market value of debt (50%) | <u>10,00,000</u> |
| Market value of stock (50%) | <u>10,00,000</u> |

| | |
|---------------------------------|-----------------|
| | Rs. |
| Net operating income | 3,60,000 |
| Interest on debt (8%) | <u>80,000</u> |
| Earnings to common | <u>2,80,000</u> |
| 2% of Rs. 2,80,000 = Rs. 5,600. | |

(ii) Implied required equity return = $\frac{\text{Rs. } 2,80,000}{\text{Rs. } 10,00,000} = 28\%$

| | |
|------------------------------|------------------|
| (b) (i) | Rs. |
| Total value of firm | 20,00,000 |
| Market value of debt (20%) | <u>4,00,000</u> |
| Market value of equity (80%) | <u>16,00,000</u> |
| | Rs. |
| Net operating income | 3,60,000 |
| Interest on debt (8%) | <u>32,000</u> |
| Earnings to common | <u>3,28,000</u> |

Implied required equity return = $\frac{\text{Rs. } 3,28,000}{\text{Rs. } 16,00,000} = 20.5\%$

(ii) It is lower because Zion uses less debt in its capital structure. As the equity capitalisation is a linear function of the debt-to-equity ratio when we use the net operating income approach, the decline in required equity return offsets exactly the disadvantage of not employing so much in the way of "cheaper" debt funds.

| | |
|---|--------------|
| 5. (a) (i) Value if unlevered (in thousands): | Rs. |
| EBIT | 30,00 |
| Profit before taxes | 30,00 |
| Taxes | <u>12,00</u> |
| Profit after taxes | <u>18,00</u> |
| ÷ required equity return | .18 |
| Value if unlevered | <u>10000</u> |

(ii) Value with Rs. 40,00,000 in debt:

Value = Value if unlevered + Value of tax shield

Value = Rs. 10,000 + .40 (Rs. 4,000) = Rs. 11,600.

(iii) Value with Rs. 70,00,000 in debt:

Value = Rs. 10,000 + .40 (Rs. 7,000) = Rs. 12,800.

Due to the tax subsidy, the firm is able to increase its value in a linear manner with more debt.

(b) (i) Value if unlevered (in thousands): the same as before, namely, Rs. 10,000 (Rs. 1 crore).

(ii) Value with Rs. 40,00,000 in debt:

$$\text{Value} = \text{Rs. } 10,000 + \left[1 - \frac{(1 - .40)(1 - .25)}{1 - .30} \right] \text{Rs. } 4,000$$

= Rs. 11,429

(iii) Value with Rs. 70,00,000 in debt:

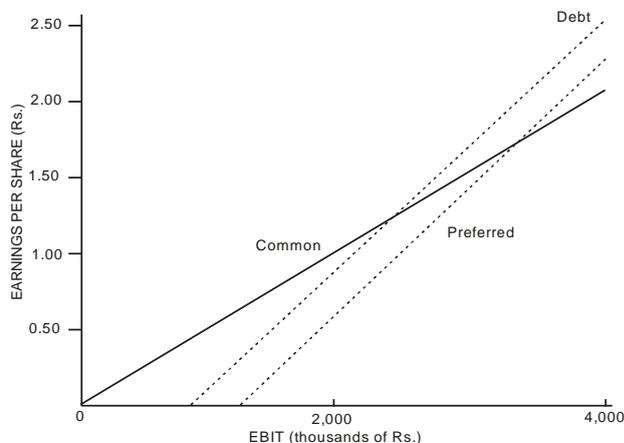
$$\text{Value} = \text{Rs. } 10,000 + \left[1 - \frac{(1 - .40)(1 - .25)}{1 - .30} \right] \text{Rs. } 7,000$$

= Rs. 12,500

The presence of personal taxes reduces the tax advantage associated with corporate debt. As long as the personal tax on stock income is less than that on debt income, however, the net tax advantage to debt is positive. As a result, the value of the firm rises with more debt, but not as rapidly as if there were no personal taxes or if the personal tax rate on stock and debt income were the same.

6. (a)

| | (in thousands) | | |
|---|----------------|------------------------|---------------------|
| | Debt Rs. | Preferred Stock Rs. | Common Stock Rs. |
| EBIT | 1,500 | 1,500 | 1,500 |
| Interest on existing debt | 360 | 360 | 360 |
| Interest on new debt | <u>480</u> | <u>—</u> | <u>—</u> |
| Profit before taxes | 660 | 1,140 | 1,140 |
| Taxes | <u>264</u> | <u>456</u> | <u>456</u> |
| Profit after taxes | 396 | 684 | 684 |
| Preferred stock dividend | <u>—</u> | <u>440</u> | <u>—</u> |
| Earnings available to common shareholders | 396 | 244 | 684 |
| Number of shares | 800 | 800 | 1,050 |
| Earnings per share | .495 | .305 | .651 |



- (b) Approximate indifference points: Debt and common, Rs. 24 lakhs, preferred and common, Rs. 33 lakhs in EBIT; Debt dominates preferred by the same margin throughout, there is no difference point. Mathematically, the indifference point between debt and common is (in thousands):

$$\frac{\text{EBIT}^* - \text{Rs. } 840}{800} = \frac{\text{EBIT}^* - \text{Rs. } 360}{1,050}$$

$$\text{EBIT}^* (1,050) - \text{Rs. } 840(1,050) = \text{EBIT}^* (800) - \text{Rs. } 360 (800)$$

$$250\text{EBIT}^* = \text{Rs. } 5,94,000$$

$$\text{EBIT}^* = \text{Rs. } 2,376$$

Note that for the debt alternative, the total before-tax interest is Rs. 840, and this is the intercept on the horizontal axis. For the preferred stock alternative, we divide Rs. 440 by $(1-.40)$ to get Rs. 733. When this is added to Rs. 360 in interest on existing debt, the intercept becomes Rs. 1,093.

- (c) For the present EBIT level, common stock is clearly preferable. EBIT would need to increase by $\text{Rs. } 2,376 - \text{Rs. } 1,500 = \text{Rs. } 876$ before an indifference point with debt is reached. One would want to be comfortably above this indifference point before a strong case for debt should be made. The lower the probability that actual EBIT will fall below the indifference point, the stronger the case that can be made for debt, all other things remain the same.

| 7. | 2004 | 2005 | 2006 |
|--|------|------|------|
| Current ratio | 1.19 | 1.25 | 1.20 |
| Acid-test ratio | .43 | .46 | .40 |
| Average collection period | 18 | 22 | 27 |
| Inventory turnover | NA* | 8.2 | 6.1 |
| Total debt to net worth | 1.38 | 1.40 | 1.61 |
| Long-term debt to total capitalization | .33 | .32 | .32 |
| Gross profit margin | .200 | .163 | .132 |
| Net profit margin | .075 | .047 | .026 |
| Asset turnover | 2.80 | 2.76 | 2.24 |
| Return on assets | .21 | .13 | .06 |

Analysis : The company's profitability has declined steadily over the period. As only Rs. 50,000 is added to retained earnings, the company must be paying substantial dividends. Receivables are growing slower, although the average collection period is still very reasonable relative to the terms given. Inventory turnover is slowing as well, indicating a relative build up in inventories. The increase in receivables and inventories, coupled with the fact that net worth has increased very little, has resulted in the total debt-to-worth ratio increasing to what would have to be regarded on an absolute basis as a high level.

The current and acid-test ratios have fluctuated, but the current ratio is not particularly inspiring. The lack of deterioration in these ratios is clouded by the relative build up in both receivables and inventories, evidencing a deterioration in the liquidity of these two assets. Both the gross profit and net profit margins have declined substantially. The relationship between the two suggests that the company has reduced relative expenses in 2005 in particular. The build up in inventories and receivables has resulted in a decline in the asset turnover ratio, and this, coupled with the decline in profitability, has resulted in a sharp decrease in the return on assets ratio.

| 8. (a) | Cash budget (in thousands) | | | | | |
|---------------------------------------|----------------------------|------|-------------|--------------|------------|------|
| | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. |
| | Rs. | Rs. | Rs. | Rs. | Rs. | Rs. |
| Sales | 500 | 600 | 600 | 1,000 | 650 | 750 |
| Collections, current month's sales | | | 120 | 200 | 130 | |
| Collections, previous month's sales | | | 420 | 420 | 700 | |
| Collections, previous 2 month's sales | | | <u>50</u> | <u>60</u> | <u>60</u> | |
| Total cash receipts | | | <u>590</u> | <u>680</u> | <u>890</u> | |
| Purchases | | 360 | 600 | 390 | 450 | |
| Payment for purchases | | | 360 | 600 | 390 | |
| Labour costs | | | 150 | 200 | 160 | |
| Other expenses | | | <u>100</u> | <u>100</u> | <u>100</u> | |
| Total cash disbursements | | | <u>610</u> | <u>900</u> | <u>650</u> | |
| Receipts less disbursements | | | <u>(20)</u> | <u>(220)</u> | <u>240</u> | |

| (b) | Jan. | Feb. | Mar. |
|-----------------------|------|------|-------|
| | Rs. | Rs. | Rs. |
| Additional borrowings | 20 | 220 | (240) |
| Cumulative borrowings | 420 | 640 | 400 |

The amount of financing peaks in February owing to the need to pay for purchases made the previous month and higher labour costs. In March, substantial collections are made on the prior month's billings, causing a large net cash inflow sufficient to pay off the additional borrowings.

(c) Pro forma balance sheet, March 31 (in thousands):

| | Rs. | | Rs. |
|---------------------|------------|---------------------|------------|
| Cash | 50 | Accounts payable | 450 |
| Accounts receivable | 620 | Bank loan | 400 |
| Inventories | <u>635</u> | Accruals | <u>212</u> |
| Current assets | 1,305 | Current liabilities | 1,062 |

| | | | |
|------------------|--------------|------------------------------|--------------|
| Net fixed assets | 1,836 | Long-term debt | 450 |
| | | Common stock | 100 |
| | | Retained earnings | <u>1,529</u> |
| Total assets | <u>3,141</u> | Total liabilities and equity | <u>3,141</u> |

Accounts receivable = Sales in March \times .8 + Sales in February \times .1

Inventories = Rs. 545 + Total purchases January through March – Total sales January through March \times .6

Accounts payable = Purchases in March

Retained earnings = Rs. 1,439 + Sales – Payment for purchases – Labour costs and – Other expenses, all for January through March

9. Receivable turnover = $\frac{360}{75} = 4.8$

Profitability of additional sales = Rs. 90,00,000 \times .2 = Rs. 18,00,000.

Additional receivables associated with the new sales = $\frac{\text{Rs. } 90,00,000}{4.8} = \text{Rs. } 18,75,000$

Additional investment in receivables associated with the new sales
= Rs. 18,75,000 \times .8 = Rs. 15,00,000

New level of receivables associated with the original sales = $\frac{\text{Rs. } 6,00,00,000}{4.8} = \text{Rs. } 1,25,00,000$

Old level of receivables associated with the original sales = $\frac{\text{Rs. } 6,00,00,000}{8} = \text{Rs. } 75,00,000$

Incremental receivable investment, original sales = Rs. 50,00,000.

Total increase in receivable investment = Rs. 15,00,000 + Rs. 50,00,000 = Rs. 65,00,000.

Carrying cost of additional investment = .20 \times Rs. 65,00,000 = Rs. 13,00,000.

Advise: As the incremental carrying cost is less than the incremental profitability, the company should lengthen its credit period from 30 to 60 days.

10. (a) Cost of trade credit: If discounts are not taken, upto Rs. 97,000 can be raised after the second month. The cost would be

$$\frac{3}{97} \times \frac{365}{60} = 18.81\%$$

- (b) Cost of bank loan: Assuming the compensating balance would not otherwise be maintained, the cost would be

$$\frac{13}{90} = 14.44\%$$

- (c) Cost of factoring: The factor fee for the year would be

$$2\% \times \text{Rs. } 12,00,000 = \text{Rs. } 24,000$$

The savings effected, however, would be Rs. 18,000, giving a net factoring cost of Rs. 6,000. Borrowing Rs. 75,000 on the receivables would thus cost

$$\frac{(12\%)(\text{Rs. } 75,000) + \text{Rs. } 6,000}{\text{Rs. } 75,000} = \frac{\text{Rs. } 9,000 + \text{Rs. } 6,000}{\text{Rs. } 75,000} = 20.00\%$$

Advise: Bank borrowing would be the cheapest source of funds.

11. (a) Ram is confusing the percentage cost of using funds for 5 days with the cost of using funds for a year. These costs are clearly not comparable. One must be converted to the time

scale of the other.

$$(b) \frac{2}{98} \times \frac{365}{5} = 149.0\%$$

- (c) Assuming that the firm has made the decision not to take the cash discount, it makes no sense to pay before the due date. In this case, payment 30 days after purchases are received rather than 15 would reduce the annual interest cost to 37.2 per cent.

$$12. (a) Q^* = \sqrt{\frac{2(20)(40)}{100}} = 4$$

Carrying costs = Rs. $0.10 \times 1,000$ = Rs. 100. The optimal order size would be 4,000 filters, which represents five orders a month.

$$(b) Q^* = \sqrt{\frac{2(20)(40)}{50}} = 5.66$$

Since the lot size is 1,000 filters, the company would order 6,000 filters each time. The lower the carrying cost, the more important ordering costs become relatively, and the larger the optimal order size.

$$(c) Q^* = \sqrt{\frac{2(20)(10)}{100}} = 2$$

The lower the order cost, the more important carrying costs become relatively and the smaller the optimal order size.

13. (a) Profit Maximization and Wealth Maximization

The two most important objectives of financial management are as follows:

1. Profit maximization
2. Value maximization

Under Profit maximization the financial manager's sole objective is to maximize profits. The objective could be short term or long term. Under the short-term objective the manager would intend to show profitability in a short run say one year. When profit maximization becomes a long-term objective the concern of the financial manager is to manage finances in such a way so as to maximize the EPS of the company.

Under Value maximization the financial manager strives to manage finances in such a way so as to continuously increase the market price of the company's shares.

Under the short term profit maximization objective a manager could continue to show profit increased by merely issuing stock and using the proceeds to invest in risk free or near to risk free securities. He may also opt for increasing profit through other non-operational activities like disposal of fixed assets etc. This would result in a consistent decrease in the shareholders profit – that is earning per share would fall. Hence it is commonly thought that maximizing profits in the long run is a better objective. This would increase the Earnings per Share on a consistent basis. However, even this objective has its own shortcomings, which are as follows:

- It does not specify the timing of duration of expected returns, hence one cannot be sure whether an investment fetching a Rs. 10 lakhs return after a period of five years is more or less valuable than an investment fetching a return of Rs. 1.5 lakhs per year for the next five years.
- It does not consider the risk factor of projects to be undertaken; in many cases a highly levered firm may have the same earning per share as a firm having a lesser percentage of debt in the capital structure. In spite of the EPS being the same the market price per share of the two companies shall be different.

- This objective does not allow the effect of dividend policy on the market price per share; in order to maximize the earning per share the companies may not pay any dividend. In such cases the earning per share shall certainly increase, however the market price per share could as well go down.
- For the reasons just given, an objective of maximizing profits may not be the same as maximizing the market price of share and hence the firms value. The market price of a firm's share represents the focal judgment of all market participants as to the value of the particular firm. It takes into account present as well as futuristic earnings per share; the timing, duration and risk of these earnings; the dividend policy of the firm; and other factor that bear upon the market price of the share. The market price serves as a barometer of the company's performance; it indicates how well management is doing on behalf of its shareholders. Management is under continuous watch. Shareholders who are not satisfied may sell their shares and invest in some other company. This action, if taken, will put downward pressure on the market price per share and hence reduce the company's value.

(b) Functions of Finance manager and Functions of an Accountant

The twin aspects viz. procurement and effective utilization of funds are crucial tasks which the finance manager faces. The financial manager is required to look into the financial implications of any decision in the firm. Thus all decisions involving management of funds come under the preview of the finance manager. Large number of decisions involves substantial or material changes in the value of funds procured or employed. The finance manager has to manage funds in such a way so as to make their optimum utilization and to ensure that their procurement is in a manner so that the risk, cost and control considerations are properly balanced under a given situation. He may not however, be concerned with the decisions, which do not affect the basic financial management and structure.

Whereas, an accountant's job is primarily to record the business transactions, prepare financial statements, which show the working results of the organization for a given period and its financial condition at a given point of time. He has to record the various happenings in monetary terms to ensure that assets, liabilities, incomes and expenses are properly grouped, classified and disclosed in the financial statements. The accountant is not concerned with management of funds, which is a specialized task though historically many accountants have been managing funds also. In the modern day business, since the size of the business has grown enormously the finance function is a separate one and is a complex task. The finance manager or the controller has a task entirely different from that of the accountant. He has to manage funds.

(c) Global Depository Receipts (GDRs) and American Depository Receipts (ADRs)

Global Depository Receipt is a negotiable certificate denominated in US dollars, which represents a non-US companies publicly, traded local currency equity.

GDRs are created when the local currency shares of an Indian company are delivered to the depository's local custodian bank, against which depository bank issues depository receipts in US\$.

The GDRs may be freely traded in the overseas market like any other dollar denominated security either on a foreign stock exchange or in the over the counter market of qualified institutional buyers (QIBs). By issue of GDRs Indian companies are able to tap global equity market to raise foreign currency funds by way of equity. It has distinct advantage over debt as there is no repayment of the principal and service costs are lower.

Rule 144A of SEC of USA permits companies from outside USA to offer their GDRs to QIBs.

Whereas, American Depository Receipts (ADRs) are depository receipts issued by a company in the USA and are governed by the provisions of Security and Exchange Commission of USA. As the regulations are severe, Indian Companies tap the American

market through private debt placements of GDRs listed in London Luxembourg Stock Exchanges.

Apart from legal impediments, ADRs are costlier than GDRs. Legal fees are considerably high for US listing. Registration fee in USA is also substantial. Hence ADRs are less popular than GDR's.

(d) Debt Securitisation and Bridge Finance

Debt Securitisation is a method of recycling of funds. It is especially beneficial to financial intermediaries to support the lending volumes. Assets generating steady cash flows are packaged together and against this asset pool, market securities can be issued, e.g. housing finance, auto loans, and credit card receivables.

Process of Debt Securitisation

- (i) The origination function – A borrower seeks a loan from a finance company, bank, HDFC. The credit worthiness of borrower is evaluated and contract is entered into with repayment schedule structured over the life of the loan.
- (ii) The pooling function – Similar loans on receivables are clubbed together to create an underlying pool of assets. The pool is transferred in favour of Special purpose Vehicle (SPV), which acts as a trustee for investors.
- (iii) The securitisation function – SPV will structure and issue securities on the basis of asset pool. The securities carry a coupon and expected maturity which can be asset-based/mortgage based. These are generally sold to investors through merchant bankers. Investors are – pension funds, mutual funds, insurance funds.

The process of securitisation is without recourse i.e. investor bears the credit risk or risk of default. Credit enhancement facilities like insurance, LOC & guarantees are provided.

Whereas, Bridge finance refers to loans taken by a company normally from commercial banks for a short period, pending disbursement of loans sanctioned by financial institutions. Normally, it takes time for financial institutions to disburse loans to companies. However, once the loans are approved by the term lending institutions, companies, in order not to lose further time in starting their projects, arrange short term loans from commercial banks. Bridge loans are also provided by financial institutions pending the signing of regular term loan agreement, which may be delayed due to non-compliance of conditions stipulated by the institutions while sanctioning the loan.

14. (a) Need for Social Cost Benefit Analysis

Several hundred crores of rupees are committed every year to various public projects. Analysis of such projects has to be done with reference to social costs and benefits. Since they cannot be expected to yield an adequate commercial return on the funds employed, at least during the short run.

Social cost benefit analysis is important for the private corporations also who have a moral responsibility to undertake socially desirable projects.

The need for social cost benefit analysis arises due to the following:

- (i) The market prices used to measure costs & benefits in project analysis, may not represent social values due to market imperfections.
- (ii) Monetary cost benefit analysis fails to consider the external positive & negative effects of a project.
- (iii) Taxes & subsidies are transfer payments & hence irrelevant in national economic profitability analysis.
- (iv) The redistribution benefits because of projects need to be captured.
- (v) The merit wants are important appraisal criteria for social cost benefit analysis.

(b) Venture Capital Financing

It refers to financing of new high risky venture promoted by qualified entrepreneurs who lack experience and funds, to give shape to their ideas. In other words, under venture capital financing venture capitalist make investment to purchase equity or debt securities from inexperienced entrepreneurs who undertake highly risky ventures with a potential of success.

Some common methods of venture capital financing are as follows:

- (i) Equity financing: When funds are required for a longer period but the firm fails to provide returns to the investors during the initial stages, the venture capital finance is provided by way of equity share capital.
- (ii) Conditional loan: A conditional loan is repayable in the form of a royalty after the venture is able to generate 'sales'. Here royalty ranges between 2 and 15 per cent. No interest is paid on such loans.
- (iii) Income note: It combines the features of both conventional and conditional loans. The concern has to pay both viz., interest and royalty on sales but at substantially low rates.
- (iv) Participating debenture: Such a security carries charges in three phases – in the start up phase no interest is charged, next stage a low rate of interest is charged up to a particular level of operation, after that, a high rate of interest is required to be paid.

(c) Factoring

It is a new financial service that is presently being developed in India. It is not just a single service, rather a portfolio of complimentary financial services available to clients i.e., sellers. The sellers are free to avail of any combination of services offered by the factoring organizations according to their individual requirements.

Factoring involves provision of specialized services relating to credit investigation, sales ledger management, purchase and collection of debts, credit protection as well as provisions of finance against receivables and risk bearing. In factoring accounts receivables are generally sold to a financial institution (a subsidiary of commercial bank called "Factor") who charges commission and bears the credit risks associated with the accounts receivable purchased by it.

Its operation is very simple. Clients enter into an agreement with the "Factor" working out a factoring arrangement according to his requirements. The Factor then takes the responsibility of monitoring; follow up, collection and risk taking and provision of advance. The factor generally fixes up a limit customer wise for the client (seller).

The seller selects various combinations of these functions by changing provision in the factoring agreements. The seller may utilize the factor to perform the credit checking and risk taking functions but not the lending functions. Under this arrangement the factor checks and approves the invoices.

(d) Profitability Index (PI)

In capital budgeting, there are cases when we have to compare or rank a number of proposals each involving different amount of cash flows. One of the methods of comparing/ranking such proposal is to work out what is known as profitability index (PI). It is also called benefit-cost ratio. It may be calculated as follows:

$$PI = \frac{\text{Present value of net cash inflows}}{\text{Initial cash outlay}}$$

Suppose, for example a company is considering two projects viz., A and B. The present value of net cash flows and initial outlay are as follows:

| | Project A | Project B |
|-----------------------------------|-----------|-----------|
| | Rs. | Rs. |
| Present value of net cash inflows | 36,000 | 34,000 |
| Initial cash outlay | 30,000 | 29,000 |

In the case of the example, Project A has profitability index of 1.20 whereas Project B's ratio is 1.17 calculated as under:

$$A = \frac{\text{Rs. } 36,000}{\text{Rs. } 30,000} = 1.20$$

$$B = \frac{\text{Rs. } 34,000}{\text{Rs. } 29,000} = 1.17$$

It may be noted that as long as the profitability index is equal to or greater than 1.00, the project is acceptable.

Alternatively, profitability index may also be calculated as under:

$$PI = \frac{\text{Sum of discounted cash inflows}}{\text{Sum of discounted cash outflows}}$$

15. (a) Inter-relationship between Investment, Financing and Dividend Decisions

The finance functions are divided into three major decisions, viz., investment, financing and dividend decisions. It is correct to say that these decisions are inter-related because the underlying objective of these three decisions is the same, i.e. maximisation of shareholders' wealth. Since investment, financing and dividend decisions are all interrelated, one has to consider the joint impact of these decisions on the market price of the company's shares and these decisions should also be solved jointly. The decision to invest in a new project needs the finance for the investment. The financing decision, in turn, is influenced by and influences dividend decision because retained earnings used in internal financing deprive shareholders of their dividends. An efficient financial management can ensure optimal joint decisions. This is possible by evaluating each decision in relation to its effect on the shareholders' wealth.

The above three decisions are briefly examined below in the light of their inter-relationship and to see how they can help in maximising the shareholders' wealth i.e. market price of the company's shares.

Investment decision: The investment of long term funds is made after a careful assessment of the various projects through capital budgeting and uncertainty analysis. However, only that investment proposal is to be accepted which is expected to yield at least so much return as is adequate to meet its cost of financing. This has an influence on the profitability of the company and ultimately on its wealth.

Financing decision: Funds can be raised from various sources. Each source of funds involves different issues. The finance manager has to maintain a proper balance between long-term and short-term funds. With the total volume of long-term funds, he has to ensure a proper mix of loan funds and owner's funds. The optimum financing mix will increase return to equity shareholders and thus maximise their wealth.

Dividend decision: The finance manager is also concerned with the decision to pay or declare dividend. HE assists the top management in deciding as to what portion of the profit should be paid to the shareholders by way of dividends and what portion should be retained in the business. An optimal dividend pay-out ratio maximises shareholders' wealth.

The above discussion makes it clear that investment, financing and dividend decisions are interrelated and are to be taken jointly keeping in view their joint effect on the shareholders' wealth.

(b) William J Baumal vs Miller- Orr Cash Management Model

According to William J Baumal's Economic order quantity model optimum cash level is that level of cash where the carrying costs and transactions costs are the minimum. The carrying costs refers to the cost of holding cash, namely, the interest foregone on marketable securities. The transaction costs refers to the cost involved in getting the marketable securities converted into cash. This happens when the firm falls short of cash and has to sell the securities resulting in clerical, brokerage, registration and other costs.

The optimum cash balance according to this model will be that point where these two costs are equal. The formula for determining optimum cash balance is:

$$C = \sqrt{\frac{2U \times P}{S}}$$

Where,

C = Optimum cash balance

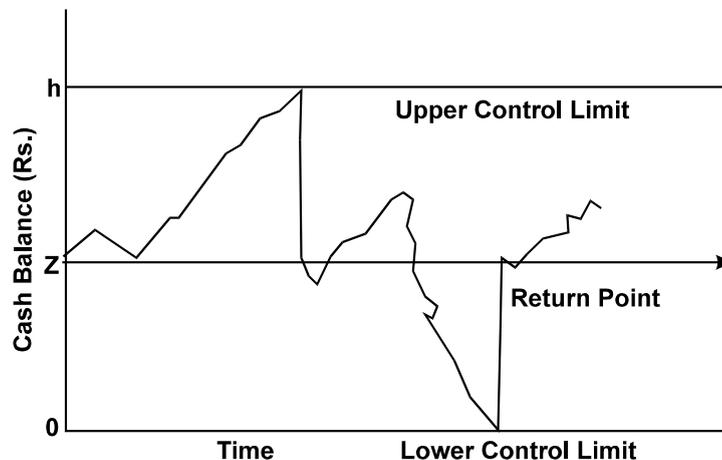
U = Annual (monthly) cash disbursements

P = Fixed cost per transaction

S = Opportunity cost of one rupee p.a. (or p.m)

Miller-Orr cash management model is a net cash flow stochastic model. This model is designed to determine the time and size of transfers between an investment account and cash account. In this model control limits are set for cash balances. These limits may consist of h as upper limit, z as the return point, and zero as the lower limit.

When the cash balances reaches the upper limit, the transfer of cash equal to h-z is invested in marketable securities account. When it touches the lower limit, a transfer from marketable securities account to cash account is made. During the period when cash balance stays between (h,z) and (z, 0) i.e high and low limits no transactions between cash and marketable securities account is made. The high and low limits of cash balance are set up on the basis of fixed cost associated with the securities transactions, the opportunity cost of holding cash and the degree of likely fluctuations in cash balances. These limits satisfy the demands for cash at the lowest possible total costs. The diagram given below illustrates the Miller – Orr model.



MILLER-ORR CASH MANAGEMENT MODEL

(c) Importance of Funds Flow Statement

The balance sheet and profit and loss account failed to provide the information which is provided by funds flow statement i.e., changes in financial position of an enterprise. This statement indicates the changes which have taken place between the two accounting dates. This statement by giving details of sources and uses of funds during a given period is of great

help to the users of financial information. It is also a very useful tool in the hands of management for judging the financial and operating performance of the company. It also indicates the working capital position which helps the management in taking policy decisions regarding dividend etc.

The projected funds flow statement can also be prepared and thus budgetary control and capital expenditure control can be exercised in the organisation.

(d) Pecking order Theory of Capital Structure

The pecking order theory was proposed by Donaldson in 1961. The pecking order theory suggests that firm rely for finance, as much as they can, on internally generated funds. If internally generated funds are not enough then they will move to additional debt finance then equity. This is because the issue cost of internally generated funds has the lowest issue cost and cost of new equity is the highest. Myers has suggested that the firm follows a 'modified pecking order' in their approach to financing. Myers has suggested asymmetric information as a reason for heavy reliance on internal generated funds. He demonstrates that with asymmetric information, equity shares are interpreted by the market as bad news since managers are only motivated to issue equity share when share markets are undeveloped. Further, the use of internal finance ensures that there is regular source of finance which might be in line with company's expansion programme. If additional funds are required over and above internally generated funds, then borrowings will be next alternative in this theory.

Thus, pecking order theory rests on:

- (i) Stickly dividend policy,
- (ii) A preference for internal funds,
- (iii) An aversion to issue equity shares.

PAPER – 5 : INCOME-TAX AND CENTRAL SALES TAX

QUESTIONS

1. Choose the correct answer having regard to the provisions of the Income-tax Act, 1961–
- (a) In respect of shares held as investment, while computing the capital gains, securities transaction tax paid in respect of sale of listed shares sold in a recognized stock exchange,
- is deductible upto Rs.1,00,000
 - is deductible where capital gains is below Rs.5,00,000
 - is not deductible at all.
- (b) Family pension received by a widow of a member of the armed forces where the death of the member has occurred in the course of the operational duties in the circumstances and subject to prescribed conditions, is
- Exempt upto Rs.3,50,000
 - Totally exempt u/s 10(19)
 - Totally chargeable to tax
- (c) Income by way of voluntary contributions of political parties is exempt provided :
- the political party keeps and maintains a record of each such voluntary contribution in excess of Rs.10,000 and of the name and address of the person who made such contribution
 - the political party keeps and maintains a record of such voluntary contribution in excess of Rs.20,000 and of the name and address of the person who made such contribution
 - the political party keeps and maintains a record of such voluntary contribution in excess of Rs.30,000 and of the name and address of the person who made such contribution
- (d) An assessee can file a revised return of income at any time before the completion of assessment or before expiry of the following period, whichever is earlier
- one year from the end of the relevant assessment year
 - two years from the end of the relevant assessment year
 - six months from the end of the relevant assessment year
2. Income of a previous year is chargeable to tax in the immediately following assessment year. Are there any exceptions to this rule? Discuss.
3. Mr. Sridhar furnishes the following particulars of his income earned during the previous year relevant to the assessment year 2007-08:

| Particulars | Amount (Rs.) |
|---|--------------|
| Interest on German Development Bonds (two-fifths is received in India) | 80,000 |
| Income from agriculture in Bangladesh, received there but later on Rs.50,000 is remitted to India (agricultural activity is controlled from Bangladesh) | 1,93,000 |
| Income from property in Canada received outside India [Rs.76,000 is used in Canada for meeting educational expenses of Mr. Sridhar's daughter in USA and Rs.10,000 is later on remitted to India] | 90,000 |
| Royalty fees received by him outside India from the Government of India | 20,000 |
| Income earned from business in Kampala (Uganda) which is controlled from Delhi (Rs.15,000 is received in India) | 65,000 |

| | |
|--|-----------|
| Dividend paid by a foreign company but received in India on April 10, 2006 | 46,500 |
| Past untaxed profit of Financial year 2004-05 brought to India in Financial year 2006-07 | 10,43,000 |
| Profits from a business in Chennai and managed from outside India | 35,000 |
| Profits on sale of a building in India but received in Sri Lanka | 14,80,000 |
| Pension from a former employer in India, received in Rangoon | 50,000 |
| Gift in foreign currency from a friend received in India on January 20, 2007 | 80,000 |

Find out the gross total income of Mr. Sridhar, if he is (i) resident and ordinarily resident in India, (ii) resident but not ordinarily resident in India, or (iii) non-resident in India for the assessment year 2007-08.

4. Fill in the blanks, having regard to the provisions of Income tax Act, 1961:
- The accounts of the trust for the previous year shall be subject to audit where its total income exceeds _____.
 - In the case of demerger, the loss attributable to the resulting company shall be carried forward for the unexpired period of _____.
 - Deduction under section 80JJAA is available for an amount equal to _____ of additional wages paid to new regular workmen employed by an Indian company whose gross total income includes profits and gains derived from any industrial undertaking engaged in the manufacture or production of article or thing.
 - A belated return filed under section 139(4) _____ be revised.
 - The maximum limit of compensation received at the time of voluntary retirement, that is not taxable is Rs. _____.
5. Mr. Sagar (age: 30 years) is in the teaching staff of a well-know private college in Pune. During the previous year 2006-07, he gets the following emoluments: Basic salary : Rs.1,90,000; dearness allowance : Rs.12,300 (forming part of salary) ; city compensatory allowance: Rs.3,100; children's education allowance: Rs.2,340 (Rs.65 per month for 3 children) ; house rent allowance: Rs.16,200 (rent paid: Rs.20,500) and remuneration from the Delhi University for acting as paper setter and examiner: Rs.40,000 (expenditure incurred by Mr. Sagar: Rs.3,400). He gets Rs.21,233 as reimbursement from the employer in respect of expenditure incurred on medical treatment of his family members from a doctor. Besides, he gets Rs.12,600 as reimbursement from the employer in respect of books and journals purchased by him for discharging his official work.

He contributes 11 per cent of his salary to recognized provident fund to which a matching contribution is made by the employer. During the year, he spends Rs.3,000 on purchase of books for teaching purposes (not being reimbursed by the employer). Besides, he makes, an expenditure of Rs.6,000 on maintaining car for going to the college and pays Rs.16,000 as insurance premium on own life insurance policy (sum assured: Rs.50,000). Determine the taxable income and tax liability of Mr. Sagar for the assessment year 2007-08. Does it make any difference if education allowance is for the grandchildren of Mr. Sagar?

6. Ravi (age : 30 years) owns four houses which are used by him for his residential purposes:

| Particulars | House I | House II | House III | House IV |
|-------------------------|---------|----------|-----------|----------|
| | Rs. | Rs. | Rs. | Rs. |
| Municipal valuation (a) | 30,000 | 70,000 | 92,000 | 28,000 |
| Fair rent (b) | 40,000 | 58,000 | 96,000 | 37,000 |
| Standard rent (c) | 37,000 | 74,000 | NA | 36,000 |

| | | | | |
|--|--------|--------|--------|--------|
| Municipal taxes paid by Ravi | 3,000 | 16,000 | 29,000 | 12,000 |
| Insurance premium | 1,000 | 2,000 | 11,700 | 2,810 |
| Interest on capital borrowed for purchase/construction (inclusive of one-fifth of pre-construction period's interest, wherever applicable) (capital was borrowed before April 1, 1999 in the case of House I, III and IV. In the case of House II capital was borrowed on April 16,2004) | 11,060 | 75,900 | 54,090 | 85,300 |
| Repayment of Loan taken from LIC for acquiring house property | Nil | 6,000 | 17,000 | 2,000 |

Find out the total income and tax liability of Ravi for the assessment year 2007-08 taking into consideration the following information:

- (1) Income of Ravi from other sources is Rs. 14,75,000.
 - (2) Ravi has deposited Rs. 8,000 in the public provident fund during the previous year 2006-07.
 - (3) For the assessment year 2006-07, House III was considered for the benefit of section 23(2)(a)(i). Ravi would like to change the option if it is permissible under law and if it is otherwise beneficial for reducing tax bill.
7. State with reasons, whether the following statements are true or false:
- (a) Value of fringe benefit chargeable to tax under Chapter XII-H in the hands of the employer, is not to be treated as a perquisite under Section 17(2) in the hands of the employee.
 - (b) Where the Commissioner of Income-tax is satisfied that the activities of the charitable trust, which has been accorded registration is not genuine, he can cancel the registration by passing an order in writing.
 - (c) Zero coupon bonds of eligible Corporation, held for more than 12 months, will be long-term capital assets.
 - (d) Where an urban agricultural land owned by an individual, continuously used by him for agricultural purposes for a period of two years prior to the date of transfer, is compulsorily acquired under law and the compensation is fixed by the State Government, resultant capital gain is exempt.
 - (e) Where the assessee incurs any expenditure, in respect of which payment is made in a sum exceeding Rs.20,000 by a crossed cheque or crossed bank draft, no disallowance is attracted under section 40A(3).
8. Discuss the provisions of Section 12A and 12AA regarding registration of a trust.
9. Discuss the provisions regarding deductions allowable to an assessee in respect of the following:
- (a) Expenditure on treatment of a dependent being a person with disability
 - (b) Payment of interest on loan for higher education.
10. The Central Government acquires a house property owned by Ram on October 17, 1992. This property was purchased on April 10, 1976 for Rs. 76,000 (cost of improvement incurred during 1985-86: Rs.40,000 and fair market value of the property on April 1, 1981 was Rs.1,32,000). The Government awards Rs. 5,67,000 as compensation out of which Rs.1,00,000 is received on May 4, 2006 and Rs.4,67,000 is received on April 1,2008. Expenditure incurred by Ram for getting compensation fixed: Rs.2,000. Being aggrieved against the award, Ram files an appeal. The Bombay court, as per order dated August 1, 2007 enhanced the compensation from Rs. 5,67,000 to Rs. 8,50,000 (legal expenditure incurred in court's proceedings: Rs.10,000). Ram receives the additional compensation of Rs. 2,83,000 on April 15, 2009. Compute the income under the head

“Capital gains”. Does it make any difference if the additional compensation is received by X's son after the death of Ram? [Cost Inflation Index (CII): F.Y.2006-07: 519, F.Y.1992-93: 223, F.Y.1985-86:133]

11. Siddhartha (age: 24 years) a resident individual, furnishes the following information for the assessment year 2007-08:

Profit and Loss Account for the year ending March 31, 2007

| | Rs. | | Rs. |
|--|-----------------|-----------------|-----------------|
| Office expenses | 11,000 | Gross profit | 3,78,000 |
| Telephone under OYT scheme | 8,000 | Sundry receipts | 8,000 |
| Salary to staff | 42,000 | | |
| Depreciation | 28,000 | | |
| Traveling expenses | 43,000 | | |
| Loss of cash by an employee through embezzlement | 5,000 | | |
| Amount transferred to special reserve Account | 7,500 | | |
| Expenditure on the occasion of Diwali | 7,100 | | |
| Interest and legal expenses | 44,000 | | |
| Sundry expenses | 8,500 | | |
| Net Profit | <u>1,81,900</u> | | |
| | <u>3,86,000</u> | | <u>3,86,000</u> |

Other information:

- (1) Salary to staff includes payment of Rs.12,000 out of India on which tax has not been deducted at source nor paid to the Government .
- (2) Depreciated value of plant and machinery on April 1, 2006 is Rs.1,10,000 (rate of depreciation : 15 per cent)
 - (a) A plant whose written down value on April 1, 2006 is Rs.17,440 is sold during the previous year for Rs.11,000.
 - (b) A machinery (cost price Rs.20,000) whose written down value on April 1,2006 is Rs.2,350 is sold during the previous year for Rs.15,000.
 - (c) During the year, Siddhartha purchases a new plant for office for Rs.1,22,670 which is eligible for depreciation of the rate of 15 per cent. The plant is installed and put to use on May 15, 2006.
- (3) Traveling expenses include Rs.10,000 being hotel expenditure of an employee in respect of an official visit to Bombay for 5 days.
- (4) Interest includes a payment of Rs.5,000 out of India on which tax has not been deducted.
- (5) Sundry expenses include expenditure of Rs.1,000 on maintenance of guest house in Delhi for the purpose of carrying on the business and Rs.4,000 being employer's contribution towards ESI out of which Rs.600 is paid after the due date of submission of return of income.
- (6) Legal expenses include the following payments :
 - (a) Payment of Rs.4,000 to B, an employee of Siddhartha, for filing income-tax appeal.
 - (b) Payment of Rs.5,000 to C, not being an employee of Siddhartha, for preparation of return of income.

- (c) Payment of Rs.11,000 to D, an advocate who is not an employee of Siddhartha, for filing income-tax appeals and giving tax advice.
- (d) Payment of Rs.2,000 to E, a chartered accountant who is not an employee of Siddhartha, for obtaining tax advice.

Determine the taxable income and tax liability of Siddhartha for the assessment year 2007-08 assuming that sundry receipt include Rs.5,000 being amount of endowment insurance policy received from the Life Insurance Corporation of India at the time of maturity of the policy (i.e. December 5, 2006) [amount of insurance premium last paid on June 5, 2006: Rs.400].

12. Discuss the following special issues relating to Income from house property
 - (i) Income earned by residents from house properties situated in foreign countries
 - (ii) Properties which are used for agricultural purposes
 - (iii) Deductions from Annual Value
13. (a) Is there any time limit for a fund/trust/institution/university or other educational institution/hospital/medical institution to make an application for grant of exemption or continuation thereof under section 10(23C)?
 - (b) The Finance Act, 2006 has restricted the scope of exempt income of an Investor Protection Fund. Discuss whether this statement is correct.
14. Keeping in view the provisions of the Income-tax Act, 1961, state briefly the correctness or otherwise of the contentions / claims made by the assesseees as given below:
 - (a) X (date of birth July 9, 1929) is a person of Indian origin having British passport. For the assessment year 2007-08, he is resident but not ordinarily resident in India. Income of X chargeable to tax in India for the assessment year 2007-08 is Rs.1,80,000. According to X, his liability is nil.
 - (b) X declares the following income for the assessment year 2007-08: Business loss: Rs.1,60,000; short-term capital gains : Rs.1,65,000; long-term capital gains: Rs.1,80,000. On March 31, 2007, he has deposited Rs.70,000 in his public provident fund account. As long-term capital gains are taxable at the rate of 20 per cent, he wants to set off business loss against short-term capital gains to reduce his tax bill.
 - (c) X (30 years) receives a sum of Rs.15,000 from a bank as interest on fixed deposits for the assessment year 2007-08. It wants to claim deduction of Rs.12,000 under section 80L.
 - (d) X Ltd. had transferred non-listed shares (being long-term capital asset) for Rs.8,50,000 during the previous year 2006-07. On the date of transfer, it does not own a residential house property. It purchases a residential house property for Rs.17,00,000 on July 31, 2007 and wants to avail exemption under section 54F.
 - (e) Mrs. A (50 years) is a Government employee posted at Delhi. She gets Rs.60,000 per month as salary and Rs.3,000 per month as entertainment allowance. She has been provided a Maruti car by the employer for official and personal use. The taxable value of the perquisite in respect of car is Rs.14,400 for the assessment year 2007-08.
 - (f) X Ltd has transferred agriculture land within the municipal limits of Chandigarh. The land was used by the taxpayer for agriculture purposes since 1970. Within 3 months from the transfer of land, the taxpayer purchases another agriculture land by investing the entire sale consideration. It wants to claim exemption under section 54B.
15. Write short notes on:
 - (a) Association of Persons and Body of Individuals
 - (b) Company in which public are substantially interested
 - (c) Income from business connection in India
 - (d) Profit in lieu of salary

- (e) Tax exemption to political parties
16. Fill up the blanks, having regard to the provisions of the Central Sales tax Act.
- D, a dealer in Maharashtra has sold goods to G in Gujarat for which the sales tax rate in Maharashtra is 2% and the rate in Gujarat is 3%.The CST leviable is _____.
 - The application for compulsory registration should be submitted by a dealer within _____days of making an inter-state sale.
 - C of Karnataka sends goods to T of Tamil Nadu for doing some job work. T adds some materials of the own, completes the job and returns the same to C. The above transaction _____ (attracts/does not attract) liability to CST.
 - The dealer aggrieved by an order of the highest appellate authority in the State should normally file appeal within _____days from the date of _____.
17. State the reasons whether the statements are True or False, as per the provisions of Central Sales Tax Act:
- If a dealer applies for amendments to his certificate of CST registration, the amendment will be effective from the date on which the dealer makes on application for amendment.
 - The certificate of CST registration is non-transferable.
 - One Form 'C' issued by the buyer to seller can cover all transaction in one financial year.
 - In case of penultimate seller making sales to the actual exporter, the actual exporter shall issue certificate to the penultimate seller in Form 'H'.
 - The directors of the private company in liquidation are jointly and severally liable personally for any sales tax liability of the company in liquidation.
18. Write short notes on:
- Business
 - Dealer
 - Sale
19. (a) When is a Government deemed to be a dealer for the purposes of the Central Sales Tax Act?
- (b) What are the different ways to register as a dealer under the Central Sales Tax Act?
20. From the following details, compute the central sales-tax payable by a dealer carrying on business in New Delhi:

| | Rs. |
|---|-----------|
| Total turnover for the year 2006-07 (April, 2006 to March, 2007) which included | 24,00,000 |
| (i) Trade commission for which credit notes have to be issued separately | 72,000 |
| (ii) Installation charges | 37,500 |
| (iii) Excise duty | 1,20,000 |
| (iv) Freight, insurance and transport charges recovered separately in the invoice | 90,000 |
| (v) Goods returned by dealers within six months of sale but after the end of the financial year | 60,000 |
| (vi) Central Sales-tax – Buyers have issued "C" forms for all purchases. | |

SUGGESTED ANSWERS/ HINTS

1. (a) (iii) (b) (ii) (c) (ii) (d) (i)
2. The income of an assessee for a previous year will be charged to income-tax in the subsequent assessment year. However, in a few cases this rule does not apply and the income is taxed in the same year in which it is earned. Thus, the assessment year and the previous year are the same.

These exceptions have been made to protect the interests of revenue. The exceptions are as follows:

(1) Shipping business of non-resident [Section 172]

Where a ship, belonging to or chartered by a non-resident carries passengers, livestock, mail or goods shipped at a port in India, the ship is allowed to leave the port only when the tax due has been paid or satisfactory arrangement has been made for payment thereof. Seven and a half per cent of the freight paid or payable to the owner or the charterer or to any person on his behalf whether in India or outside India on account of such carriage is deemed to be his income which is charged to tax in the same year in which it is earned.

(2) Persons leaving India [Section 174]

Where it appears to the Assessing Officer that any individual may leave India during the current assessment year or shortly after its expiry and he has no present intention of returning to India, the total income of such individual for the period from the expiry of the previous year for that assessment year upto the probable date of his departure from India is chargeable to tax in that assessment year.

(3) AOP/BOI/Artificial Juridical Person formed for a particular event or purpose [Section 174A]

If an AOP/BOI etc. is formed or established for a particular event or purpose and the Assessing Officer apprehends that the AOP/BOI is likely to be dissolved in the same assessment year in which it is formed or immediately after such assessment year, the Assessing Officer can make assessment of the total income of such person up to the date of dissolution. Such total income is chargeable to tax in that assessment year itself.

(4) Persons likely to transfer property to avoid tax [Section 175]

During the current assessment year if it appears to the Assessing Officer that a person is likely to charge, sell, transfer, dispose off or otherwise part with any of his assets to avoid payment of any liability under this Act, the total income of such person for the period from the expiry of the previous year for that assessment year to the date when the Assessing Officer commences proceedings under this section is chargeable to tax in that assessment year.

(5) Discontinued business [Section 176]

Where any business is discontinued in any year, any sum received after the discontinuance shall be deemed to be the income of the recipient and charged to tax accordingly in the year of receipt. By virtue of section 176(4), where any profession is discontinued in any year on account of the cessation of the profession or by the retirement or death of the person carrying on the profession, any sum received after the discontinuance shall be deemed to be the income of the recipient and charged to tax in the year of receipt.

3. Computation of Gross total income of Mr. Sridhar for Assessment Year 2007-08

| S.No. | Particulars | Resident and ordinarily resident Rs. | Resident but not ordinarily resident Rs. | Non-resident Rs. | Reasons |
|-------|--------------------|--------------------------------------|--|------------------|---------|
| i | Interest on German | | | | |

| | | | | | |
|------|---|------------------|------------------|----------------|--------------------------|
| | Development Bonds: - Two-fifths is taxable on receipt basis - Three-fifths is taxable in the case of resident and ordinarily resident on accrual basis | 32,000 48,000 | 32,000 ---- | 32,000 ---- | See Note 1 See Note 2 |
| ii | Income from agriculture in Bangladesh: Income accrued and received outside India | 1,93,000 | ---- | ---- | See Note 3 |
| iii | Income from property in Canada received outside India Income accruing and arising outside India | 90,000 | ---- | --- | See Note 2 |
| iv | Royalty fees received by him outside India from the GOI | 20,000 | 20,000 | 20,000 | See Note 4 |
| v | Income earned from a business in Kampala, controlled from Delhi: - Rs.15,000 is taxable on receipt basis - Balance is not taxable in the case of non-resident | 15,000 50,000 | 15,000 50,000 | 15,000 ---- | See Note 1 See Note 5 |
| vi | Dividend paid by a foreign company: Income received in India | 46,500 | 46,500 | 46,500 | See Note 1 |
| vii | Past untaxed profit brought to India: Not an income of the previous year 2006-07 relevant for the assessment year 2007-08, hence not taxable | ---- | ---- | ---- | See Note 6 |
| viii | Profits from a business in Chennai and managed from outside India: Income accrued in India | 35,000 | 35,000 | 35,000 | See Note 7 |
| ix | Profit on sale of a building in India but received in Sri Lanka: Income deemed to accrue or arise in India | 14,80,000 | 14,80,000 | 14,80,000 | See Note 8 |
| x | Pension from an Indian former employer received in Rangoon: Income deemed to accrue or arise in India | 50,000 | 50,000 | 50,000 | See Note 9 |
| xi | Gift from a friend Now it is taken as an income | 80,000 | 80,000 | 80,000 | See Note 10 |
| | Gross Total Income | 21,39,500 | 18,08,500 | 17,58,500 | |

Note -

- (1) Income received in India is taxable in all cases.
 - (2) It is received as well as accrued outside India. It is taxable only in the case of resident and ordinarily resident taxpayer.
 - (3) It is received outside India (remittance of Rs. 50,000 to India is not "receipt" of income in India) and accrued outside India. It is foreign income from a business, which is controlled from outside India. Therefore, it is taxable in India only in the case of resident and ordinarily resident taxpayer.
 - (4) As royalty is received from the Government of India, it is deemed to accrue or arise in India. It is Indian Income. It is always taxable.
 - (5) It is accrued outside India and received outside India. It is foreign income. It is taxable in the case of resident and ordinarily resident taxpayer. It is not taxable in the case of non-resident. Since it is business income and business is controlled from India, it is taxable in the hands of resident but not ordinarily resident taxpayer.
 - (6) It is income of the previous year 2004-05. It cannot be taxed at the time of remittance to India 2006-07.
 - (7) As the income is accrued in India, it is Indian income. It is, therefore, taxable in all cases.
 - (8) As the building is situated in India, income is deemed to be accrued in India. Consequently, it is Indian income and is chargeable to tax in all cases.
 - (9) Service was rendered in India. Pension income is deemed to accrue in India. It is Indian income and is chargeable to tax in all cases.
 - (10) If the aggregate amount of gift (s) received by an individual/HUF from all persons (not being relative) during a financial year exceeds Rs.50,000, it is taxable as income.
4. (a) the basic exemption limit
 - (b) 8 years
 - (c) 30%
 - (d) cannot
 - (e) 5,00,000.

5. Computation of tax liability of Mr. Sagar for Assessment Year 2007-08

| Particulars | Rs. | Rs. |
|--|--------|----------|
| Basic salary | | 1,90,000 |
| Dearness allowance | | 12,300 |
| City compensatory allowance | | 3,100 |
| Education allowance: | 2,340 | |
| Less: Exempt [see Note 3] | 1,560 | 780 |
| House rent allowance | 16,200 | |
| Less: Exempt [see Note 1] | 270 | 15,930 |
| Reimbursement of medical expenditure (i.e., Rs.21,233 – Rs.15,000) | | 6,233 |
| Reimbursement of expenditure on books and journals for official work (not chargeable to tax) | | Nil |
| Gross salary | | 2,28,343 |
| Less: Deductions under section 16 | | ---- |
| Net salary | | 2,28,343 |

| | |
|--|-----------------|
| Income from other sources (i.e. Rs.40,000 – Rs.3,400) | 36,600 |
| Gross total income | <u>2,64,943</u> |
| Less: Deduction under section 80C [see Note 4] | 32,253 |
| Total income | <u>2,32,690</u> |
| Tax on total income | |
| Income-tax | 21,538 |
| Add: Surcharge (surcharge is not applicable since total income does not exceed Rs.10 lakh) | Nil |
| | <u>21,538</u> |
| Add: Education cess @ 2% | 431 |
| Tax payable | <u>21,969</u> |
| Tax payable (rounded off) | <u>21,970</u> |

Note -

- House rent allowance is exempt from tax to the extent of the least of the following:
 - Rs. 80,920 (being 40% of Rs. 2,02,300);
 - Rs. 16,200 (being the amount of house rent allowance);
 - Rs. 270 [being the excess of rent, paid over 10% of salary, i.e., Rs. 20,500 – 10% of (Rs. 1,90,000 + Rs. 12,300)]
- Expenditure on books and maintenance of car is application of income and is not deductible.
- Education allowance for children is not chargeable to tax up to Rs. 100 per child per month for a maximum of 2 children. Therefore, in this case, the amount not chargeable to tax is Rs. 65 per month for 2 children, i.e., Rs.1,560. If, however, education allowance is given for grandchildren, then exemption is not available.
- Deduction under section 80C is computed as under :

| | |
|--|-------------------|
| Contribution to recognised provident fund | |
| [i.e., 11% of (Rs.1,90,000 + Rs.12,300)] | Rs. 22,253 |
| Insurance premium (maximum: 20% of sum assured i.e. 20% of 50,000) | <u>Rs. 10,000</u> |
| Total deduction | <u>Rs. 32,253</u> |

- Only one house can be treated as self-occupied (hereinafter referred to as SO) for the purpose of section 23(2)(a). It is not necessary that the same house should be treated as self-occupied every year. Other houses will be treated as deemed to be let out (hereinafter referred to as DLO) property. Ravi has the following four options (income computation is given in Note):

| Particulars | Option 1 | Option 2 | Option 3 | Option 4 |
|-------------|---------------------|--------------------|--------------------|--------------------|
| House I | (-) 11,060 (SO) | 12,740 (DLO) | 12,740 (DLO) | 12,740 (DLO) |
| House II | (-) 38,100 (DLO) | (-) 75,900 (SO) | (-)38,100 (DLO) | (-)38,100 (DLO) |
| House III | (-) 7,190 (DLO) | (-) 7,190 (DLO) | (-) 30,000 (SO) | (-) 7,190 (DLO) |

| | | | | |
|----------------------------|--------------|--------------|--------------|------------|
| House IV | (-) 68,500 | (-) 68,500 | (-) 68,500 | (-) 30,000 |
| | (DLO) | (DLO) | (DLO) | (SO) |
| Income from house property | (-) 1,24,850 | (-) 1,38,850 | (-) 1,23,860 | (-) 62,550 |

It would be beneficial to Ravi if he treats House II as self-occupied. In such a case, his total income and tax liability would be calculated as under -

| | |
|--|------------------|
| Income from House Property | (-) 1,38,850 |
| Income from other sources | <u>14,75,000</u> |
| Gross total income | 13,36,150 |
| Less : Deduction under section 80C [i.e., PPF: Rs.8,000 + repayment of loan taken from LIC for purchasing houses: Rs.25,000 | 33,000 |
| Total Income | <u>13,03,150</u> |
| Tax on Rs.13,03,150 | 3,40,945 |
| Add: Surcharge @ 10% | <u>34,095</u> |
| Tax and surcharge | 3,75,040 |
| Add : Education cess (2% of tax and surcharge) | 7,501 |
| Tax liability | <u>3,82,541</u> |
| Tax liability (rounded off) | 3,82,540 |

Note:

1. Computation of income from house property under different options

| Particulars | House I Rs. | House II Rs | House III Rs. | House IV Rs. |
|--|----------------|----------------|------------------|-----------------|
| If these houses are SO | | | | |
| Net annual value under section 23(2)(a) | Nil | Nil | Nil | Nil |
| Less : interest on capital borrowed for acquiring house property but subject to maximum of Rs.30,000 (Rs.1,50,000 in the case of House II) | 11,060 | 75,900 | 30,000 | 30,000 |
| Income if the house is treated as SO | (-)11,060 | (-) 75,900 | (-) 30,000 | (-) 30,000 |
| If these houses are DLO | | | | |
| Municipal valuation (a) | 30,000 | 70,000 | 92,000 | 28,000 |
| Fair rent (b) | 40,000 | 58,000 | 96,000 | 37,000 |
| Standard rent (c) | 37,000 | 74,000 | NA | 36,000 |

| | | | | |
|--|--------|------------|-----------|------------|
| Expected rent (a) or (b) whichever is higher but subject to maximum of (c) | 37,000 | 70,000 | 96,000 | 36,000 |
| Gross annual value | 37,000 | 70,000 | 96,000 | 36,000 |
| Less: Municipal taxes | 3,000 | 16,000 | 29,000 | 12,000 |
| Net annual value | 34,000 | 54,000 | 67,000 | 24,000 |
| Less : Deductions under section 24 | | | | |
| 30% of net annual value | 10,200 | 16,200 | 20,100 | 7,200 |
| Interest on capital borrowed | 11,060 | 75,900 | 54,090 | 85,300 |
| Income if these houses are DLO | 12,740 | (-) 38,100 | (-) 7,190 | (-) 68,500 |

7. (a) True. Any fringe benefit collectively enjoyed by the employees shall be taxed in the hands of employer in accordance with Chapter-XII-H of the Income Tax Act. Such benefits are not to be treated as perquisite in the hands of the employees.
- (b) True. The Commissioner of Income-tax can cancel the registration of a trust by passing an order in writing if he is satisfied that the activities of the trust are not genuine. However, such cancellation can be made only after giving the applicant a reasonable opportunity of being heard.
- (c) True. According to Sec.2(42A), 'Zero Coupon Bonds' of eligible corporation held for less than 12 months shall be treated as short term capital assets. This implies that such bonds held for 12 months or more shall be treated as Long term capital assets.
- (d) False. The Capital Gain arising from transfer of a Capital Asset by Compulsory Acquisition under any law or transfer where consideration is determined or approved by Central Government or R.B.I. is exempt under section 10(37) of the Income Tax Act 1961. In the given situation, the compensation is fixed by the State Government. Hence, the resultant capital gain is not exempt.
- (e) False. Section 40A(3) of the Income Tax Act has been amended by the Taxation Laws (Amendment) Act, 2006 to require payment over Rs.20,000 to be made by an account payee cheque drawn on bank or account payee bank draft to avoid any disallowance. Otherwise, 20% of such expenditure is disallowed.

8. Section 12A - Registration of trust

The exemptions contained in section 11 and 12 shall not apply in relation to the income of any trust or institution unless the following conditions are satisfied:

1. The person in receipt of income should make an application for the registration of the trust in the prescribed form and in the prescribed manner to the Commissioner or before the expiry of a period of one year from the date of the creation of the trust, whichever is earlier and such trust or institution is registered under section 12AA. The grant of registration shall be one of the conditions for grant of income-tax exemption. The Commissioner may admit an application for the registration of any trust after the expiry of the aforesaid period.

Application made after one year - Where an application for registration of a charitable trust or institution is made after the period of 1 year from the date of the creation, the provisions of sections 11-13 will apply in relation to the income from the date of such creation only if the Commissioner is, for reasons to be recorded in writing, satisfied that the person in receipt of the income was prevented from making the application before the expiry of such period. If he is not so satisfied, the provisions of sections 11-13 will apply only from the 1st day of the financial year in which such application is made.

2. Audit - Where the total income of the trust without giving effect to the provisions of section 11 and 12 exceeds the basic exemption limit, the accounts of the trust must be audited by a chartered accountant the report of such audit in the prescribed form duly signed and verified by such accountant and setting forth such prescribed particulars, should be furnished along with the return.

Section 12AA - Procedure for Registration

Accordingly, the Commissioner, on receipt of an application for registration of a trust or institution made under section 12A(a) shall proceed as follows:

- (i) He will call for such documents or information from the trust or institution as he thinks necessary in order to satisfy himself about the genuineness of activities of the trust or institution and may also make such enquiries as he may deem necessary in this behalf.
 - (ii) After satisfying himself about the objects of the trust or institution and the genuineness of its activities, he shall pass an order in writing registering the trust or institution.
 - (iii) If he is not satisfied, he shall pass an order in writing refusing to register the trust or institution. A copy of such an order issued under (ii) and (iii) shall be sent to the applicant. However, an order under (iii) shall not be passed unless the applicant has been given a reasonable opportunity of being heard.
 - (iv) Every order granting or refusing registration shall be passed within six months from the end of the month in which the application for registration of trust or institution is received by the Commissioner.
 - (v) The Commissioner is now empowered to cancel registration of trusts. Accordingly, w.e.f. 1.10.2004, if the Commissioner of Income-tax is satisfied that the activities of any trust or institution are not genuine or are not being carried out in accordance with the objects of the trust or institution, he can pass an order in writing canceling the registration granted under the said section. However, the trust or institution should be given a reasonable opportunity of being heard.
9. (a) Deduction in respect of maintenance including medical treatment of a dependent disabled [Section 80DD]
 - (i) Section 80DD provides deduction to an assessee, who is a resident in India, being an individual or Hindu undivided family. Any amount paid for the medical treatment (including nursing), training and rehabilitation of a dependant, being a person with disability, or any amount paid or deposited under a scheme framed in this behalf by the Life Insurance Corporation or any other insurer or the Administrator or the Specified Company as referred to in Section 2(h) of the Unit Trust of India (Transfer of Undertaking and Repeal) Act, 2002, for the maintenance of a dependant, being a person with disability, qualifies for deduction.
 - (ii) The benefit of deduction under this section is also available to assessee incurring expenditure on maintenance including medical treatment of persons suffering from autism, cerebral palsy and multiple disabilities.
 - (iii) The quantum of deduction is Rs. 50,000 and in case of severe disability (i.e. person with 80% or more disability) the deduction shall be Rs.75,000.
 - (iv) The term 'dependent' has been defined to include in the case of an individual, the spouse, children, parents, brothers and sisters of the individual and in the case of a Hindu Undivided Family (HUF), a member thereof, who is wholly or mainly dependent on the assessee and has not claimed any deduction under section 80U in the computation of his income.
 - (v) For claiming the deduction, the assessee shall have to furnish a copy of the certificate issued by the medical authority under the Persons with Disability (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995 along with the return of income under section 139.

- (vi) Where the condition of disability requires reassessment, a fresh certificate from the medical authority shall have to be obtained after the expiry of the period mentioned in the original certificate in order to continue to claim the deduction.
- (b) Deduction in respect of interest loan taken for higher education [Section 80E]
- (i) Section 80E provides deduction to an individual-assessee in respect of any interest on loan paid by him in the previous year out of his income chargeable to tax.
- (ii) The loan must have been taken for the purpose of pursuing his higher education i.e. full-time studies for any graduate or post-graduate course in engineering, medicine, management or for post-graduate course in applied sciences or pure sciences including mathematics and statistics.
- (iii) The loan must have been taken from any financial institution or approved charitable institution.
- (iv) The deduction is allowed in computing the total income in respect of the initial assessment year (i.e. the assessment year relevant to the previous year, in which the assessee starts paying the interest on the loan) and seven assessment years immediately succeeding the initial assessment year or until the interest is paid in full by the assessee, whichever is earlier.
- (v) "Approved charitable institution" means an institution established for charitable purposes and notified under section 10(23C) by the Central Government or an institution referred to in section 80G(2)(a).
- (vi) "Financial institution" means –
- (a) a banking company to which the Banking Regulation Act, 1949 applies (including a bank or banking institution referred to in section 51 of the Act); or
- (b) any other financial institution which the Central Government may, by notification in the Official Gazette, specify in this behalf.
10. In case of compulsory acquisition by the Government of India of any property under any law in force, the capital gain becomes chargeable in the year in which the compensation is first received. Similarly, enhanced compensation is taxable in the previous year of actual receipt.

Computation of Capital gain of Ram for Assessment year 2007-08

| Particulars | Amount (Rs.) |
|--|-----------------|
| Gross Compensation | 5,67,000 |
| Less: Expenses on transfer | 2,000 |
| Net compensation | <u>5,65,000</u> |
| Less: Indexed cost of acquisition (Note 1) | 2,94,360 |
| Indexed cost of improvement (Note 2) | <u>67,068</u> |
| Long-term capital gain | <u>2,03,572</u> |

Notes:

1. Indexed cost of acquisition is computed as follows:

$$\text{Rs. } 1,32,000^* \times \frac{223^{**}}{100^*} = \text{Rs. } 2,94,360$$

*Fair market value on April 1, 1981

** Cost inflation Index for 1992-93 i.e. the year in which property is acquired.

***Cost inflation index for 1981-82

2. Indexed cost of improvement is computed as follows:

$$\text{Rs.}40,000 \times \frac{223^{**}}{133^{**}} = \text{Rs.}67,068$$

*Cost of improvement

** Cost inflation index of the year in which property is acquired (i.e., 1992-93)

***Cost inflation index of the year in which improvement took place. (i.e., 1985-86)

Computation of Capital Gain of Mr. Ram for Assessment year 2010-11

| Particulars | Amount (Rs.) |
|----------------------------|-----------------|
| Additional compensation | 2,83,000 |
| Less: Expenses on transfer | 10,000 |
| Net compensation | <u>2,73,000</u> |
| Less: Cost of acquisition | Nil |
| Cost of improvement | Nil |
| Long term capital gain | <u>2,73,000</u> |

If the additional compensation is received by Ram's son, it will be taxable in the hands of son.

Note:

1. It is assumed that the provisions relating to additional compensation remain the same for A.Y. 2010-11.
2. Students may note that only the provisions for A.Y. 2007-08 are relevant for November 2007 exams. This problem involves the computation of capital gains for two different A.Y.s – year of receipt of original compensation and year of receipt of additional compensation. It has been given to help the students to understand the treatment of additional compensation received.

11. Computation of total income and tax liability of Mr. Siddhartha for the A.Y.2007-08

| | Rs. | Rs. |
|--|--------------|---------------|
| Net profit as per Profit and Loss account | | 1,81,900 |
| Add: Inadmissible expenses: | | |
| Salary paid outside India [not deductible as tax has not been deducted at source] | 12,000 | |
| Depreciation (taken separately) | 28,000 | |
| Traveling expenses [fully deductible under section 37(1)] | --- | |
| Payment of interest out of India [not deductible as tax and the recipient is not represented in India] | 5,000 | |
| Expenditure on maintenance of guest house [deductible under section 37(1)] | --- | |
| Employer's contribution towards ESI which is paid after due date of submission of return of income | 600 | |
| Legal expenses in respect of income-tax matters [such expenses are fully deductible] | --- | |
| Amount transferred to special reserve account | <u>7,500</u> | <u>53,100</u> |
| | | 2,35,000 |
| Less : Depreciation [see Note] | 31,000 | |

| | | |
|---|--------------|-----------------|
| Amount credited but not taxable | | |
| (amount of insurance policy) | <u>5,000</u> | <u>36,000</u> |
| Income under the head "Profits and gains of business or profession" | | 1,99,000 |
| Income from other sources | | Nil |
| Gross total income | | <u>1,99,000</u> |
| Less : Deduction under section 80C [payment of Insurance premium] | | 400 |
| Total income | | <u>1,98,600</u> |
| Tax on total income | | 14,720 |
| Add: Surcharge (not applicable as total income does not exceed Rs.10 lakhs) | | Nil |
| | | <u>14,720</u> |
| Add: Education cess @ 2% | | <u>294</u> |
| Tax liability | | <u>15,014</u> |
| Tax liability (rounded off) | | 15,010 |

Note :

Computation of depreciation:

| | |
|--|--------------------|
| Depreciated value of plant and machinery on 1.4.2006 | 1,10,000 |
| Add: Cost of plant and machinery acquired during the previous year | (+) 1,22,670 |
| Less: Sale proceeds of plant and machinery sold during the previous year | (-) <u>26,000</u> |
| Written down value | <u>2,06,670</u> |
| Amount of depreciation [15% of Rs.2,06,670] | 31,000 |

12. (i) According to section 5, in case of a resident in India (resident and ordinarily resident in case of individuals and HUF) their global income is taxed in India. Accordingly, income earned by residents from house property situated in foreign countries is taxable in India under the head "Income from House Property".
- (ii) Income derived from any farm building or land appurtenant thereto arising from the use of such building or land for agriculture purposes shall be regarded as agricultural income. If the income is derived by letting of the farm building / Land for any purpose including for residential purposes or for the purpose of any business or profession, such income shall be regarded as non-agricultural income. It would be is taxable under the head "Income from House Property".
- (iii) There are two deductions from annual value. They are –
- (1) 30% of Net Annual Value (NAV); and
 - (2) Interest on borrowed capital
 - (1) 30% of NAV is allowed as deduction under section 24(a)
 - (a) This is a flat deduction and is allowed irrespective of the actual expenditure incurred.
 - (b) In case of self-occupied property where the annual value is nil, the assessee will not be entitled to deduction of 30%, as the annual value itself is nil.
 - (2) Interest on borrowed capital is allowed as deduction u/s 24(b)
 - (a) Interest payable on loans borrowed for the purpose of acquisition, construction,

repairs, renewal or reconstruction can be claimed as deduction.

- (b) Interest payable on a fresh loan taken to repay the original loan raised earlier for the aforesaid purposes is also admissible as a deduction.
- (c) Interest relating to the year of completion of construction can be fully claimed in that year irrespective of the date of completion.

Interest payable on borrowed capital for the period prior to the previous year in which the property has been acquired or constructed, can be claimed as deduction over a period of 5 years in equal annual installments commencing from the year of acquisition or completion of construction.

13. (a) Prior to amendment by the Finance Act, 2006 w.e.f. 1.6.2006, there was no time limit for making an application for grant of exemption or continuation thereof under section 10(23C) by a fund or trust or institution or any university or other educational institution or any hospital or other medical institution referred to in sub-clauses (iv)/(v)/(vi)/(via) of section 10(23C), as briefed hereunder –

| Sub-clause of section 10(23C) | Particulars |
|----------------------------------|--|
| (iv) | Notified funds or institutions established for charitable purposes. |
| (v) | Notified trusts or institutions wholly for public religious purposes or wholly for public religious and charitable purposes |
| (vi) | Universities or other educational institutions existing solely for educational purposes and not for the purposes of profit and approved by the prescribed authority. |
| (via) | Hospital or other institution existing solely for philanthropic purposes and not for the purposes of profit and approved by the prescribed authority. |

However, the Finance Act, 2006 has now specified the time limit in respect of such applications made on or after 1.6.2006. Such applications have to be filed in the previous year for which the exemption is sought. For example, if an educational institution seeks exemption under clause (vi) for P.Y.2006-07 (i.e. A.Y.2007-08), it has to make an application for grant of exemption by 31.3.2007.

- (b) This statement is correct. Prior to amendment by the Finance Act, 2006, section 10(23EA) exempted any income of an Investor Protection Fund set up by recognized stock exchanges in India, either jointly or separately, as the Central Government may notify in this behalf. Such exemption is now restricted to income by way of contributions received from recognized stock exchanges and the members thereof w.e.f. A.Y.2007-08.
14. (a) The contention of Mr. X is correct. As X is a senior citizen, his tax liability is nil.
- (b) X should set off business loss against long-term capital gains; otherwise the deduction under section 80C will not be available.
 - (c) Deduction under section 80L is not available for A.Y.2007-08.
 - (d) A company cannot claim exemption under section 54F.
 - (e) The perquisite in respect of car is not chargeable to tax in the hands of Mrs. A. It is not even taxable in the hands of the employer as a fringe benefit tax since the employer is Government.
 - (f) Exemption under section 54B is available only in the case of an individual.
15. (a) Association of Persons (AOP) - When persons combine together for promotion of joint enterprise they are assessable as an AOP when they do not in law constitute a partnership. In order to constitute an association, persons must join in for a common purpose, common

action and their object must be to produce income; it is not enough that the persons receive the income jointly. Co-heirs, co-legatees or co-donees joining together for a common purpose or action would be chargeable as an AOP.

Body of Individuals (BOI) – It denotes the status of persons like executors or trustees who merely receive the income jointly and who may be assessable in like manner and to the same extent as the beneficiaries individually. Thus, co-executors or co-trustees are assessable as a BOI as their title and interest are indivisible. Income-tax shall not be payable by an assessee in respect of the receipt of share of income by him from BOI and on which the tax has already been paid by such BOI.

- (b) Company in which public are substantially interested [Section 2(18)] - The following companies are said to be companies in which the public are substantially interested:
- (i) A company owned by the Government (either Central or State but not Foreign) or the Reserve Bank of India (RBI) or in which not less than 40% of the shares are held by the Government or the RBI or corporation owned by that bank.
 - (ii) A company which is registered u/s 25 of the Companies Act, 1956 (formed for promoting commerce, arts, science, religion, charity or any other useful object).
 - (iii) A company having no share capital which is declared by the Board for the specified assessment years to be a company in which the public are substantially interested.
 - (iv) A company which is not a private company as defined in the Companies Act, 1956 and which fulfills any of the following conditions :
 - its equity shares should have, as on the last day of the relevant previous year, been listed in a recognised stock exchange in India; or
 - its equity shares carrying at least 50% (40% in case of industrial companies) voting power should have been unconditionally allotted to or acquired by and should have been beneficially held throughout the relevant previous year by (a) Government or (b) a Statutory Corporation or (c) a company in which public are substantially interested or (d) any wholly owned subsidiary of company mentioned in (c).
 - (v) A company which carries on its principal business of accepting deposits from its members and which is declared by the Central Government under section 620A of the Companies Act to be Nidhi or a Mutual Benefit Society.
 - (vi) A company whose equity shares carrying at least 50% of the voting power have been allotted unconditionally to or acquired unconditionally by and were beneficially held throughout the relevant previous year by one or more co-operative societies.
- (c) Income from business connection - Explanation 2 in clause (i) of section 9(1) clarifies the meaning of "Business connection".
- (i) 'Business connection' shall include any business activity carried out through a person acting on behalf of the non-resident.
 - (ii) He must have an authority which is habitually exercised to conclude contracts on behalf of the non-resident. However, if his activities are limited to the purchase of goods or merchandise for the non-resident, this provision will not apply.
 - (iii) Where he has no such authority, but habitually maintains in India a stock of goods or merchandise from which he regularly delivers goods or merchandise on behalf of the non-resident, a business connection is established.
 - (iv) Business connection is also established where he habitually secures orders in India, mainly or wholly for the non-resident. Further, there may be situations when other non-residents control the above-mentioned non-resident. Secondly, this non-resident may also control other non-residents. Thirdly, all other non-residents may be subject to the same common control, as that of the non-resident. In all the three situations, business

connection is established.

Exception

"Business connection", however, shall not be held to be established in cases where the non-resident carries on business through a broker, general commission agent or any other agent of an independent status, if such a person is acting in the ordinary course of his business.

A broker, general commission agent or any other agent shall be deemed to have an independent status where he does not work mainly or wholly for the non-resident. He will however, not be considered to have an independent status in the three situations explained in (iv) above, where he is employed by such a non-resident.

Explanation 3 provides that where a business is carried on in India through a person referred to in (ii), (iii) or (iv) mentioned above, only so much of income as is attributable to the operations carried out in India shall be deemed to accrue or arise in India.

(d) Profit in lieu of salary

It includes the following:

- (i) The amount of any compensation due to or received by an assessee from his employer or former employer at or in connection with the termination of his employment.
- (ii) The amount of any compensation due to or received by an assessee from his employer or former employer at or in connection with the modification of the terms and conditions of employment.
- (iii) Any payment due to or received by an assessee from his employer or former employer or from provident fund or from other funds to the extent to which it does not consist of contributions by the assessee or interest on such contributions.
- (iv) Any payment due to or received by an assessee under a Keyman Insurance policy including the sum allocated by way of bonus on such policy.
- (v) Any amount, whether in lumpsum or otherwise, due to the assessee or received by him, from any employer
 - (a) before joining employment with him, or
 - (b) after cessation of his employment with him

(e) Tax exemption to political parties

Section 13A of the Income-tax Act grants exemption from tax to political parties in respect of their income specified below:

- (i) Income from house property;
- (ii) Income from other sources;
- (iii) Capital gains; and
- (iv) Income by way of voluntary contributions received by the political parties from any person.

The aforesaid categories of income would qualify for exemption without any monetary or other limit and the income so exempted would not even be includible in the total income of the political party for the purpose of assessment.

The tax exemption will be applicable only if the following conditions are fulfilled:

- (i) The political party must keep and maintain such books and other documents as would enable the Income-tax officer to properly deduce the income of the political party from those accounts.
- (ii) The political party must keep and maintain records in respect of each such voluntary contribution which is in excess of Rs.20,000 giving details of the amounts received, the name and address of the person who has made the contribution, the date of receipts

and such other details as may be relevant or appropriate. But this does not mean that the political party need not disclose smaller contribution in its accounts which are maintained by it. The obligation to maintain proper record of voluntary contribution in excess of Rs.20,000 is over and above the obligation to maintain proper records and books of accounts in respect of all the income and expenses of the party.

- (iii) The accounts of the political party must be audited by a Chartered Accountant who is authorised, under Section 288 of the Income-tax Act, to appear as an authorised representative in income-tax proceedings before any income-tax authority.

Further, a report under section 29C(3) of the Representation of People Act, 1951 has to be submitted by the treasurer of such political party or any other person authorized by the political party in this behalf for every financial year. If there is a failure to submit the above report, no exemption under this section shall be available for the political party for that financial year.

For the purposes of this section, "political party" means a political party registered under section 29A of the Representation of the People Act, 1951.

16. (i) 2%
- (ii) 30
- (iii) Attracts
- (iv) 90 ; Service of order
17. (i) True. The amendment is effective from the date of application of the dealer or the date of effect sought for by the dealer in his application.
- If the amendment is for the rectification of mistake committed by the department, at the time issuing registration certificate, then the date of effect is the date effect of original registration certificate.
- (ii) True. There is no provision either in the Act or in the Rules for the transfer of registration. Section 7 of the Central Sales Tax 1956 and Rule 7 of Central Sales Tax (Registration and Turnover) Rules, 1957 contemplate amendment/Cancellation of registration only. The registration is in favour of the dealer and he has no right to transfer the same to any other person. Even though there is no negative provision, in the absence of positive provision and in the absence of any judicial pronouncement making the registration transferable, the certificate of registration is non-transferable.
- (iii) False. With effect from 01-10-2005, Forms C, F, EI and EII shall be issued on a quarterly basis.
- (iv) True. Through Section 5(4) to CST Act, Form H has been made mandatory with effect from 13.05.2005 for getting the benefit of section 5(3).
- (v) True. This is the strict provision of Section 18 of CST Act. However, any director may escape responsibility if he proves that the non-recovery cannot be attributed to any gross neglect, misfeasance or breach of duty on his part in relation to the affairs of the company.
18. (a) As per section 2(aa) "Business" includes-
- (i) any trade, commerce, or manufacture, or any adventure or concern in the nature of trade, commerce, or manufacture. Such trade, commerce, manufacture will be treated as business irrespective of whether adventure or concern is carried on with a motive to make profit or not and whether any gain or profit accrues or not; and
- (ii) any transaction in connection with or incidental or ancillary to such trade, commerce, manufacture, adventure or concern.
- (b) As per section 2(b) "Dealer" means any person who carries on (whether regularly or otherwise) the business of buying, selling, supplying or distributing goods, directly or

indirectly, for cash or for deferred payment, or for commission, remuneration or other valuable consideration and includes-

- (i) a local authority, a body corporate, a company, any or-operative society or other society, club, firm, Hindu undivided family or other association of persons which carries on such business;
- (ii) a factor, broker, commission agent, del credere agent, or any other mercantile agent, by whatever name called, and whether of the same description as hereinbefore mentioned or not, who carries on the business of buying, selling, supplying or distributing goods belonging to any principal whether disclosed or not; and
- (iii) an auctioneer who carries on the business of selling or auctioning goods belonging to any principal, whether disclosed or not and whether the offer of the intending purchaser is accepted by him or by the principal or a nominee of the principal.

Explanation 1 clarifies that every person who acts as an agent, in any State, of a dealer residing outside that State and buys, sells, supplies, or distributes, goods in the State or acts on behalf of such dealer as-

- (i) a mercantile agent as defined in the Sale of Goods Act, 1930 (3 of 1930), or
- (ii) an agent for handling of goods or documents of title relating to goods, or
- (iii) an agent for the collection or the payment of the sale price of goods or as a guarantor for such collection or payment, and every local branch or office in a State of a firm registered outside that State or a company or other body corporate, the principal office or headquarters whereof is outside that State, shall be deemed to be a dealer for the purposes of this Act.

Explanation 2 clarifies that a Government which, whether or not in the course of business, buys, sells, supplies or distributes, goods, directly or otherwise, for cash or for deferred payment or for commission, remuneration or other valuable consideration, shall, except in relation to any sale, supply or distribution of surplus, un-serviceable or old stores or materials or waste products or obsolete or discarded machinery or parts or accessories thereof, be deemed to be a dealer for the purposes of this Act.

- (c) As per section 2(g) "Sale", with its grammatical variations and cognate expressions, means any transfer of property in goods by one person to another for cash or deferred payment or for any other valuable consideration, and includes,-
 - (i) a transfer, otherwise than in pursuance of a contract, of property in any goods for cash, deferred payment or other valuable consideration
 - (ii) a transfer of property in goods (whether as goods or in some other form) involved in the execution of a works contract
 - (iii) a delivery of goods on hire-purchase or any system of payment by instalments
 - (iv) a transfer of the right to use any goods for any purpose (whether or not for a specified period) for cash, deferred payment or other valuable consideration
 - (v) a supply of goods by any unincorporated association or body of persons to a member thereof for cash, deferred payment or other valuable consideration
 - (vi) a supply, by way of or as part of any service or in any other manner whatsoever, of goods, being food or any other article for human consumption or any drink (whether or not intoxicating), where such supply or service, is for cash, deferred payment or other valuable consideration, but does not include a mortgage or hypothecation of or a charge or pledge on goods

- 19. (a) Explanation 2 to section 2(b) specifies that a Government, which (whether or not in the course of business) buys, sells, supplies or distribute goods (directly or otherwise), for cash (or for deferred payment or for commission, remuneration or other valuable consideration) shall be a "dealer". However, a Government will not be deemed to be a dealer for the

purposes of this Act, in relation to any sale, supply or distribution of surplus, unserviceable or old stores or materials or waste products or obsolete or discarded machinery or parts or accessories thereof. This exception is made as all Government departments have to make such sale of old goods. This exception is, however, applicable only to Government and not for the private enterprises. Public sector undertakings or Government companies are not "Government" and are not eligible for the exception.

- (b) According to section 7, there can be two ways in which a dealer can get himself registered compulsory registration [section 7(1)] or voluntary registration [section 7(2)].

Compulsory registration – As per section 7(1), every dealer liable to pay tax under the CST Act shall (Within such time as may be prescribed for the purpose) make an application for registration under the Act to such authority in the appropriate State as the Central Government by general or special order specify. Every dealer liable to pay central sales tax has to necessarily register himself with the sales tax authority of the particular State as authorized by the Central Government. If a dealer does not get himself registered, he would be subject to penalty under section 10 (i.e. imprisonment which may extend to six months or fine or both and in case of continuing offence, a fine of Rs. 50 per day till the default continues).

Voluntary registration – As per section 7(2), any dealer liable to pay tax under the sales tax law of the appropriate State, or where there is no such law in force in the appropriate State (or any part thereof), any dealer having a place of business in that State (or part) may (notwithstanding that he is not liable to pay tax under the CST Act, as he does not make inter-State sale), apply for registration under the CST Act, giving the particulars as prescribed.

20.

Computation of central sales tax payable

| | Rs. | Rs. |
|--|----------------------------------|------------------|
| Total Turnover | | 24,00,000 |
| Less: Trade Commission | 72,000 | |
| Installation Charges | 37,500 | |
| Freight, transport charges etc. shown separately | 90,000 | |
| Goods returned within six months of sale | <u>60,000</u> | <u>2,59,500</u> |
| Turnover inclusive of Central Sales Tax | | 21,40,500 |
| Central Sales Tax @ 4% | | |
| | $21,40,500 \times \frac{4}{104}$ | 82,327 |
| Taxable Turnover | | <u>20,58,173</u> |
| CST @ 4% thereof | | 82,327 |

Note: The rate of CST has been reduced to 3% w.e.f. 01.04.2007. However, since the question requires CST computation for the year 2006-07 (Apr 2006 to March 2007), the rate applicable during that period, namely 4%, is taken into account.

Amendments made by the Taxation Laws (Amendment) Act, 2006 to the Income-tax Act, 1961

The Taxation Laws (Amendment) Act, 2006 received the assent of the President on 13.7.2006. The CBDT has issued Circular No.1/2007 dated 27.4.2007, which explains the nature and effect of the amendments made by the Taxation Laws (Amendment) Act, 2006.

- (1) Tax Recovery Officer to exercise or perform the powers and functions of the Assessing Officer [Section 2(44)]
 - (i) Section 2(44) provides that a Tax Recovery Officer means any income-tax officer who may be authorised by the Chief Commissioner or Commissioner, by a general or special order in writing, to exercise the powers of a Tax Recovery Officer.
 - (ii) This clause has been amended to enable a Tax Recovery Officer, if he is authorised by the Chief Commissioner or Commissioner, by general or special order in writing, to exercise the powers and functions which are conferred on, or assigned to, an Assessing Officer under the Income-tax Act, 1961 and which may be prescribed.

(Effective from 13.7.2006)
- (2) Exemption of income of North-Eastern Development Finance Corporation Limited [Section 10(23BBF)]
 - (i) A new clause (23BBF) has been inserted in section 10 to provide for exemption of any income of the North-Eastern Development Finance Corporation Limited, being a company formed and registered under the Companies Act, 1956.
 - (ii) The exemption has been phased out beginning with inclusion of 20% of the total income for tax for the assessment year 2006-07, 40% for the assessment year 2007-08, 60% for the assessment year 2008-09, 80% for the assessment year 2009-10 and 100% from the assessment year 2010-11. The exemption under this clause shall be fully phased out in assessment year 2010-11 and no exemption would be available from such assessment year.

(Effective from A.Y.2006-07)
- (3) Removal of the requirement of renewal of notification issued under sub-clauses (iv) and (v) of section 10(23C)
 - (i) Under section 10(23C), any notification issued by the Central Government in terms of sub-clause (iv) or sub-clause (v) of the said section has, at any one time, effect for such assessment year or years, not exceeding three assessment years, as may be specified in the notification.
 - (ii) In order to dispense with the requirement of periodic renewal of notifications and consequent delays, section 10(23C) has been amended to provide that the restriction of limit of effective period of notification to a maximum of three assessment years shall be applicable in respect of notifications issued by the Central Government under sub-clause (iv) or (v) before 13.7.2006, being the date on which Taxation Laws (Amendment) Bill, 2006 received the assent of the President.
 - (iii) Therefore, on account of the above amendment, any notification issued by the Central Government under the said sub-clause (iv) or sub-clause (v), on or after 13.07.2006 will be valid until withdrawn and there will be no requirement on the part of the assessee to seek renewal of the same after three years.

Note – Clause (iv) exempts income of a fund or institution established for charitable purposes and notified by the Central Government and clause (v) exempts income of a trust or institution wholly for public religious purposes or wholly for public religious and charitable purposes, which may be notified by the Central Government.

- (4) Time limit for issue of notification under sub-clauses (iv) and (v) or for approval by the prescribed authority under sub-clauses (vi) and (via) of section 10(23C)
- (i) Under section 10(23C), in respect of application made by a fund or trust or institution etc. for grant of approval or continuation thereof, there is no time limit for issue of notification under sub-clauses (iv) and (v) or for grant of approval under sub-clauses (vi) and (via) or for passing an order rejecting such application. As a result, there is considerable delay in disposing such applications.
 - (ii) In order to expedite disposal of such applications, it has now been provided that where such an application is made on or after 13.7.2006, every notification under sub-clause (iv) or sub-clause (v) shall be issued or approval under sub-clause (vi) or sub-clause (via) shall be granted or an order rejecting the application shall be passed within the period of 12 months from the end of the month in which such application was received.
- (5) Funds/Trusts/Universities/Other educational institutions or hospitals or other medical institutions referred to in sub-clauses (iv),(v),(vi) or (via) of clause (23C) of section 10 to get their accounts audited and furnish audit report
- (i) At present, there is no requirement on the part of any fund or trust or institution or any university or other educational institution or any hospital or other medical institution referred to in sub-clauses (iv), (v), (vi) or (via) of section 10(23C) to furnish audited accounts along with the return of income.
 - (ii) It has now been provided that if the total income of any entity referred to in sub-clauses (iv), (v), (vi) and (via) of section 10(23C), without giving effect to the provisions of the said sub-clauses, exceeds the basic exemption limit in any previous year, it shall –
 - (1) get its accounts audited in respect of that year by an accountant as defined in the Explanation below sub-section (2) of section 288; and
 - (2) furnish such audit report along with the return of income for the relevant assessment year. The report must be in the prescribed form, duly signed and verified by the accountant, and must contain such particulars as may be prescribed.
- (Effective from A.Y.2006-07)
- (6) Accounts of a charitable or religious trust or institution to be audited if their total income exceeds the basic exemption limit [Section 12A(b)]
- (i) Section 12A(b) provides that for availing exemption under sections 11 and 12, the accounts of the trust or institution for the previous year should have been audited if the total income of the trust or institution as computed under the Income-tax Act, 1961, without giving effect to the provisions of section 11 and section 12, exceeds Rs.50,000 in that previous year. Such audit report should be furnished along with the return of income for the relevant assessment year in the prescribed form.
 - (ii) Rs.50,000 was the erstwhile basic exemption limit. The basic exemption limit of AOPs has been increased to Rs.1,00,000 by the Finance Act, 2005. Therefore, clause (b) of section 12A has been amended to provide for the requirement of getting the accounts audited if in the previous year the total income exceeds the basic exemption limit.
- (Effective from A.Y.2006-07)
- (7) Guidelines, manner and conditions on the basis of which approval is to be granted under section 35(1)(ii) and section 35(1)(iii)
- (i) So far, there have been no guidelines or manner or conditions in relation to grant of approval of the Central Government to a scientific research association, university, college or other institution. This has caused undue delay in the processing of applications received for approval from such entities. There was, therefore, a need to provide the step-wise procedure to be followed by the applicants, the manner in which their applications would be processed and the conditions subject to which the approval was to be granted to a scientific research association under clause (ii) of section 35(1) and to a university, college or other institution

under clause (iii) of section 35(1).

- (ii) These clauses have, therefore, been amended to lay down that the applicant scientific research association, university, college or other institution shall be approved in accordance with the guidelines, in the manner and subject to such conditions as may be prescribed. The guidelines, manner (including application Forms) and conditions have since been prescribed vide notification bearing S.O. 1856 (E) dated 30.10.2006.
- (iii) The deduction under these clauses would be available only if such association, university, college or other institution is for the time being approved in accordance with the guidelines, in the manner and subject to such conditions as may be prescribed.
- (iv) Further, it has been clarified that the deduction to which an assessee (i.e. donor) is entitled on account of payment of any sum to a scientific research association or university or college or other institution, shall not be denied merely on the ground that subsequent to payment of such sum by the assessee, the approval granted to any of the aforesaid entities is withdrawn.
- (v) Also, it has been provided that the time limit restricting the maximum effective period of a notification to 3 assessment years shall be applicable in respect of a notification issued by the Central Government under clause (ii) or clause (iii) before 13.7.2006. Consequently, any notification issued on or after 13.7.2006 shall remain in force until approval granted to such entity is withdrawn.
- (vi) In respect of an application received on or after 13.7.2006, every notification under clause (ii) or clause (iii) shall be issued or an order rejecting the application shall be passed before expiry of 12 months from the end of the month in which the application for approval was received by the Central Government.

(Effective from A.Y.2006-07)

- (8) Deduction not to be denied to the donor-assessee on subsequent withdrawal of approval of specified donee entities [Section 35(2AA), 35AC & 35CCA]
 - (i) It has been clarified that the deduction to which an assessee is entitled on account of payment of any sum by him to a National Laboratory, University, Indian Institute of Technology or a specified person for the approved programme [referred to in sub-section (2AA) of section 35] shall not be denied to the donor-assessee merely on the ground that after payment of such sum by him, the approval granted to any of the aforesaid donee-entities has been withdrawn.
 - (ii) A similar amendment has been made in section 35AC clarifying that the deduction to which an assessee (i.e. the donor) is entitled on account of payment of any sum by him to a public sector company or a local authority or to an association or institution shall not be denied to the assessee merely on the ground that after payment of such sum by him, the approval granted to such association or institution has been withdrawn or the notification notifying the eligible project or scheme referred to in section 35AC has been withdrawn.
 - (iii) A parallel amendment has been made in section 35CCA clarifying that the deduction to which an assessee is entitled on account of payment of any sum by him to an association or institution for carrying out the programme of rural development shall not be denied to the assessee merely on the ground that after payment of such sum by him, the approval granted to such programme or, as the case may be, to the association or institution has been withdrawn.

(Effective from A.Y.2006-07)

- (9) Disallowance of rent and royalty paid to a resident without deduction of tax at source [Section 40(a)(ia)]
 - (i) As per section 40(a)(ia), failure to deduct tax from interest, commission or brokerage, fees for professional services or fees for technical services payable to a resident or amounts payable to a resident contractor or sub-contractor, or failure to remit such tax after deduction

results in disallowance of such payments in the computation of income of the payer.

- (ii) This disallowance has now been extended to payments of rent and royalty. The terms rent and royalty have also been defined. Rent has been defined to have the same meaning as in clause (i) to the Explanation to section 194-I. As per the said clause, rent means any payment, by whatever name called, under any lease, sub-lease, tenancy or any other agreement or arrangement for the use of (either separately or together) any land or building (including factory building) or land appurtenant to the building (including factory building) or machinery or plant or equipment or furniture or fittings whether or not all or any of the above are owned by the payee. Royalty has the same meaning as given in Explanation 2 to section 9(1)(vi).

(Effective from A.Y.2007-08)

- (10) Disallowance of expenses for which payment above Rs.20,000 has been made otherwise than by account-payee cheque or account-payee bank draft [Section 40A]
 - (i) Section 40A(3), provides for disallowance of 20% of the expenditure if payment in a sum exceeding Rs.20,000 is made, against such expenditure, otherwise than by a crossed cheque or crossed bank draft.
 - (ii) Since a crossed cheque or crossed bank draft is a negotiable instrument, endorsement of the same has made it difficult to trace the final payee in many cases. This defeats the purpose of section 40A(3).
 - (iii) Since an account payee cheque or account payee bank draft cannot be credited to any account other than the account of the payee, section 40A(3) has been amended to require payments over Rs.20,000 to be made by an account payee cheque drawn on a bank or account payee bank draft.
 - (iv) Consequential amendment has been made in section 40A(4) to provide that where any payment has been made by an account payee cheque or account payee bank draft to escape disallowance under section 40A(3), then no person shall be allowed to raise a plea in any suit or other proceeding on the ground that the payment was not made in cash or any other manner.

(Effective from 13.7.2006)

- (11) Cash gifts received in excess of Rs.50,000 on or after 1.4.2006 to be taxed under section 56(2)(vi)
 - (i) Section 56(2)(v) provides that any sum of money exceeding Rs.25,000 received without consideration by an individual or a Hindu undivided family on or after 1.9.2004 from any person, is chargeable to income-tax under the head "Income from other sources".
 - (ii) However, in order to avoid hardship in genuine cases, certain sums of money received have been exempted -
 - (a) any sum received from any relative; or
 - (b) any sum received on the occasion of the marriage of the individual; or
 - (c) any sum received under a will or by way of inheritance; or
 - (d) any sum received in contemplation of death of the payer.
 - (iii) It is now provided that the above provisions of clause (v) shall be applicable in respect of any sum of money, exceeding the specified amount, received on or after 1.9.2004 but before 1.4.2006.
 - (iv) Further, a new clause (vi) has been inserted in section 56(2) w.e.f. A.Y. 2007-08 to provide that where any sum of money is received without consideration on or after 1.4.2006 by an individual or a Hindu undivided family from any person or persons and the aggregate value of all such sums received during the previous year exceeds Rs.50,000/-, the whole of the aggregate value of such sum shall be included in the total income of such individual or Hindu

undivided family under the head "Income from other sources".

- (v) However, certain sums of money received have been exempted i.e. any sum of money received -
- (a) from any relative; or
 - (b) on the occasion of the marriage of the individual; or
 - (c) under a will or by way of inheritance; or
 - (d) in contemplation of death of the payer; or
 - (e) from any local authority as defined in the Explanation to section 10(20) i.e. Panchayat, Municipality, Cantonment Board or Municipal Committee and District Board, legally entitled to, or entrusted by the Government with, the control or management of a Municipal or local fund; or
 - (f) from any fund or foundation or university or other educational institution or hospital or other medical institution or any trust or institution referred to in clause (23C) of section 10; or
 - (g) from any trust or institution registered under section 12AA.
- (vi) For the purposes of the new clause (vi), the term relative has been defined in the Explanation thereto to mean the -
- (i) spouse of the individual;
 - (ii) brother or sister of the individual;
 - (iii) brother or sister of the spouse of the individual;
 - (iv) brother or sister of either of the parents of the individual;
 - (v) any lineal ascendant or descendent of the individual;
 - (vi) any lineal ascendant or descendent of the spouse of the individual;
 - (vii) spouse of the person referred to in clauses (ii) to (vi).

(12) Deduction not to be denied to the donor-assessee on subsequent withdrawal of approval of the donee- association, university etc. [Section 80GGA]

- (i) Section 80GGA has been amended by inserting an Explanation each after clause (aa) in respect of the entities covered in clause (a) and clause (aa), clause (b) and clause (bb) of sub-section (2).

| Clause | Entity covered | Purpose |
|--------|---|--|
| (a) | University, college or other institution | Scientific research |
| (aa) | University, college or other institution | Social science and statistical research |
| (b) | Association or institution | Rural development, training of persons for implementing rural development programme. |
| (bb) | Public sector company or a local authority or an association or institution approved by the National Committee. | Carrying out eligible project or scheme referred to in section 35AC. |

- (ii) These Explanations clarify that the deduction to which an assessee is entitled in respect of any sum paid to a scientific research association, university, college or other institution or to an association or institution for carrying out the programme of rural development, or to a public sector company, or to a local authority or to an association or institution for carrying

out the eligible project or scheme referred to in section 35AC, respectively, shall not be denied merely on the ground that subsequent to the payment of such sum by the assessee the approval granted or, as the case may be, the notification has been withdrawn.

(Effective from A.Y.2006-07)

(13) Specified universities, colleges and other institutions compulsorily required to file their return of income [Section 139(4C) & (4D)]

- (i) Clause (e) of section 139(4C) makes it mandatory for every –
 - (a) fund or institution referred to in section 10(23C)(iv) or
 - (b) trust or institution referred to in section 10(23C)(v) or
 - (c) any university or other educational institution referred to in section 10(23C)(vi) or
 - (d) any hospital or other medical institution referred to in section 10(23C)(via)

to file a return of income for the previous year, if the total income in respect of which such entities are assessable, without giving effect to the provisions of section 10, exceeds the basic exemption limit. Such return of income should be in the prescribed form and verified in the prescribed manner and should contain such other particulars as may be prescribed. All the provisions of the Income-tax Act shall, to the extent relevant, apply as if it were a return required to be furnished under section 139(1).

- (ii) The scope of the aforementioned provisions of clause (e) of section 139(4C) has been expanded to require any university or other educational institution referred to in section 10(23C)(iiia) and any hospital or other institution referred to in section 10(23C)(iiia) to furnish their return of income for the previous year, if the total income in respect of which such entities are assessable, without giving effect to the provisions of section 10, exceeds the basic exemption limit.
- (iii) Sub-section (4D) has been inserted in section 139 to require every university, college or other institution referred to in clause (ii) and clause (iii) of section 35(1), which is not required to furnish its return of income or loss under any other provision of section 139, to furnish its return in respect of its income or loss in every previous year. All the provisions of the Income-tax Act shall apply to such return as if it were a return under section 139(1).

(Effective from A.Y.2006-07)

(14) Assessing Officer empowered to send a proposal to the Central Government recommending withdrawal of approval of scientific research association, university, college or other institution approved under section 35(1)(ii) and (iii) [Section 143]

- (i) The guidelines, the manner and the conditions in accordance with which an application made by a scientific research association, university, college or other institution shall be approved under clause (ii) or clause (iii) of sub-section (1) of section 35 have been provided by the Taxation Laws (Amendment) Act, 2006. Also, the amendment provides for grant of one time approval, which means the approval is to remain in force unless it is withdrawn.
- (ii) Therefore, the Assessing Officer is now required to satisfy himself as to the activities of the university, college or other institution referred to in clause (ii) or clause (iii) of section 35(1).
- (iii) If the activities are not being carried out in accordance with all or any of the conditions subject to which any of the said entities had been approved, the Assessing Officer may, after giving a reasonable opportunity of showing cause to the concerned entity, send a proposal to the Central Government recommending withdrawal of approval.
- (iv) The Central Government may, by order, withdraw the approval and forward a copy of the order to the concerned university, college or other institution and to the Assessing Officer.

(Effective from A.Y.2006-07)

- (15) Assessing Officer empowered to rectify assessment order to allow deduction under sections 10A, 10B and 10BA in respect of convertible foreign exchange subsequently received or brought into India [Section 155]
- (i) Under section 155(13), the Assessing Officer has power to rectify an assessment order to allow deduction under sections 80HHB, 80HHC, 80HHD, 80HHE, 80R, 80-O etc. (which was earlier denied on the ground that such income had not been received in convertible foreign exchange in India), when such income is subsequently received or brought into India with the approval of the competent authority.
 - (ii) Similar provisions are not available in respect of the provisions of sections 10A, 10B and 10BA, which also provide that foreign exchange may be brought into India within six months from the end of the financial year or within such time as may be extended by the competent authority.
 - (iii) Therefore, sub-section (11A) has been inserted in section 155 to provide that where in the assessment for any year, the deduction under section 10A or section 10B or section 10BA has not been allowed on the ground that such income -
 - (1) has not been received in convertible foreign exchange in India, or
 - (2) having been received in convertible foreign exchange outside India, or having been converted into convertible foreign exchange outside India, has not been brought into India, by or on behalf of the assessee with the approval of the Reserve Bank of India or such other approved authority and
 subsequently such income or part thereof has been or is received in, or brought into, India in the manner aforesaid, the Assessing Officer shall amend the order of assessment so as to allow deduction under section 10A or section 10B or section 10BA, as the case may be, in respect of such income or part thereof as is so received in, or brought into, India.
 - (iv) The provisions of section 154 shall, to the extent relevant, apply thereto, and the period of four years for making such rectification shall be reckoned from the end of the previous year in which such income is so received in, or brought into, India.
- (Effective from 13.7.2006)

Amendments to the Central Sales Tax Act, 1956 by
the Taxation Laws (Amendment) Act, 2007

The Taxation Laws (Amendment) Act, 2007 which has made several substantive changes in the Central Sales Tax Act, 1956, came into force on 1st April, 2007. Therefore, all the amendments are effective from that date. The rate of CST has been reduced from 4% to 3% with effect from 1.4.2007, in pursuance of the agreement for phasing out VAT entered into between the Central Government and the Empowered Committee of States for implementation of VAT. The following are the amendments made by the Taxation Laws (Amendment) Act, 2007 –

- (1) No CST exemption in respect of subsequent sale to Government [New sub-section (2) of section 6]
 - (i) Section 6(2) exempts subsequent sale of goods (sold in the course of inter-state trade or commerce), to the Government or a registered dealer by transfer of documents of title to such goods during the same movement.
 - (ii) Now, sub-section (2) has been substituted to deny this benefit to the Government. Therefore, subsequent sale to Government will no longer be exempt from CST.
 - (iii) New sub-section (2) provides that where a sale of any goods in the course of inter-State trade or commerce has either occasioned the movement of such goods from one State to another or has been effected by a transfer of documents of title to such goods during their movement from one State to another, any subsequent sale during such movement effected by a transfer of documents of title to such goods to a registered dealer, if the goods are of

the description referred to in sub-section (3) of section 8, shall be exempt from tax.

- (iv) However, no such subsequent sale shall be exempt from tax unless the dealer effecting the sale furnishes to the prescribed authority and within the prescribed time or within such further time as that authority may, for sufficient cause, permit, -
 - (a) a certificate duly filled and signed by the registered dealer from whom the goods were purchased containing the prescribed particulars in the prescribed form; and
 - (b) if the subsequent sale is made to a registered dealer, a declaration referred to in sub-section (4) of section 8:
 - (v) However, it shall not be necessary to furnish the declaration referred to in clause (b) of (iv) above in respect of a subsequent sale of goods if, -
 - (a) the sale or purchase of such goods is, under the sales tax law of the appropriate State, exempt from tax generally or is subject to tax generally at a rate which is lower than 3% or such reduced rate as may be notified by the Central Government under section 8(1) (whether called a tax or fee or by any other name); and
 - (b) the dealer effecting such subsequent sale proves to the satisfaction of the prescribed authority that such sale is of the nature referred to in this sub-section.
 - (vi) Since subsequent sale to Government is no longer exempt, the condition requiring furnishing of certificate referred to in section 8(4)(b) by the dealer effecting the sale has been removed. Therefore, section 10, imposing penalty for furnishing a false certificate or declaration, has also been accordingly amended to remove the reference to such "certificate".
- (2) Concessional rate of tax not applicable on inter-State sale to Government [Section 8(1)]
- (i) Presently, the applicable rate of CST in respect of sale of goods to the Government or registered dealer [in respect of goods specified in section 8(3)] is 4% or the State sales tax rate, whichever is lower.
 - (ii) The rate of CST has been reduced from 4% to 3% w.e.f. 1.4.2007. It is further proposed to be reduced by 1% every year and such reduction can be made by the Central Government by issue of a notification under the proviso to new section 8(1) of the Central Sales Tax, Act.
 - (iii) Henceforth, such concessional rate would not be available in respect of inter-State sale to Government. Sale to Government would be treated on par with sale to an unregistered dealer.
 - (iv) To give effect to the reduction in CST rate and denial of concessional rate in respect of sale to Government, section 8(1) has been substituted. New sub-section (1) provides that every dealer, who in the course of inter-State trade or commerce, sells to a registered dealer goods of the description referred to in sub-section (3), shall be liable to pay CST at 3% or the State sales tax rate, whichever is lower.
 - (v) Further, the Central Government may, by notification in the Official Gazette, reduce the rate of tax under this sub-section.
 - (vi) Consequential amendment has been made by substituting sub-section (4). Since sale to the Government would no longer attract concessional rate of tax, the requirement of furnishing a certificate in the prescribed form duly filled and signed by a duly authorized officer of the Government has been removed.
 - (vii) New sub-section (4) now provides that the concessional rate of tax under section 8(1) shall not apply to any sale in the course of inter-State trade or commerce unless the dealer selling the goods furnishes to the prescribed authority a declaration duly filled and signed by the registered dealer to whom the goods are sold. The declaration should be in the prescribed form and should contain the prescribed particulars.
 - (viii) Further, the declaration should be furnished within the prescribed time or within such extended time as the prescribed authority may, for sufficient cause, permit.

- (ix) Consequential amendments have been made in sub-section (5) which empowers the State Government to grant exemption from CST or to reduce the rate of CST by notification in the Official Gazette in the public interest. Hereafter, the State Government cannot grant such exemption or concession in rate of tax in respect of sale to Government. Further, the State Government is not empowered to reduce the rate of tax specified in new sub-section (2).
- (x) Consequential amendments have also been made in -
- (a) section 7 dealing with registration of dealers;
 - (b) section 9 dealing with levy and collection of tax and penalties; and
 - (c) section 10A dealing with imposition of penalty in lieu of prosecution.
- In these sections, reference to clause (a) of sub-section (4) of section 8 [which dealt with furnishing of declaration by a registered dealer to claim the concessional rate of tax specified in section 8(1)] has been substituted with sub-section (4) of section 8, since there are no clauses in new sub-section (4).
- (3) The State sales-tax rate to be the rate of CST applicable in respect of sale of goods not falling under section 8(1) [New sub-section (2) of section 8]
- (i) Presently, in respect of sale of goods, not falling under section 8(1), the applicable rates of CST are -
 - (a) in respect of declared goods, twice the State sales-tax rate;
 - (b) in respect of undeclared goods, 10% or the State sales-tax rate, whichever is higher.
 - (ii) The applicable rate of CST on sale of goods not covered under section 8(1) would now be the rate applicable to the sale or purchase of such goods inside the appropriate State under the sales tax law of that State.
 - (iii) For this purpose, a dealer shall be deemed to be a dealer liable to pay tax under the sales-tax law of the appropriate State, even if he may not be so liable under that law.
- (4) New rates of Central Sales Tax

In view of the amendments made in section 8, the new rates of CST effective from 1.4.2007 would be -

| Description of goods | Applicable rate of CST |
|--|---|
| Section 8(1) | |
| Goods specified in section 8(3) sold to Registered dealer. (Form C to be furnished by the dealer) | 3% or the State sales tax rate, whichever is lower. |
| Section 8(2) | |
| Sale of goods not falling under section 8(1) | The State sales tax rate |
| Section 8(5) | |
| Sale of goods/ classes of goods or sale by any dealer having place of business in the State or by any class of such dealers as may be specified in the notification provided the following conditions are fulfilled: | Nil rate or lower rate than specified in sub-section (1) of section 8 |
| 1 the sale is to a registered dealer | The applicable rate would be mentioned in the Notification. |
| 2. Form C has been furnished. | |

- (5) Tobacco products excluded from the list of declared goods [Section 14]
- (i) Section 14 declares certain goods to be "goods of special importance". Section 15 places restriction on imposition of sales tax by State Governments on the declared goods specified in section 14. One of the restrictions, inter-alia, is that the rate of sales tax on such goods cannot exceed 4%.
 - (ii) The Taxation Laws (Amendment) Act, 2007 has omitted clause (ix) of section 14. This clause was in respect of unmanufactured tobacco and tobacco refuse, cigars and cheroots of tobacco, cigarettes and cigarillos of tobacco and other manufactured tobacco.
 - (iii) Consequent to the omission of clause (ix), the State Governments can impose higher rates of sales tax/VAT on unmanufactured tobacco and tobacco products.

IMPORTANT NOTIFICATIONS / CIRCULARS ISSUED BETWEEN 1.5.06 and 30.4.07

I NOTIFICATIONS

- (1) Notification No.270/2006 dated 19.9.2006 – Cost Inflation Index for F.Y.2006-07

The Central Government has, vide notification no.270/2006 dated 19.9.2006 specified the cost inflation index for the financial year 2006-07. The CII for F.Y. 2006-07 is 519.

| S. No. | Financial Year | Cost Inflation Index |
|--------|----------------|----------------------|
| 1. | 1981-82 | 100 |
| 2. | 1982-83 | 109 |
| 3. | 1983-84 | 116 |
| 4. | 1984-85 | 125 |
| 5. | 1985-86 | 133 |
| 6. | 1986-87 | 140 |
| 7. | 1987-88 | 150 |
| 8. | 1988-89 | 161 |
| 9. | 1989-90 | 172 |
| 10. | 1990-91 | 182 |
| 11. | 1991-92 | 199 |
| 12. | 1992-93 | 223 |
| 13. | 1993-94 | 244 |
| 14. | 1994-95 | 259 |
| 15. | 1995-96 | 281 |
| 16. | 1996-97 | 305 |
| 17. | 1997-98 | 331 |
| 18. | 1998-99 | 351 |
| 19. | 1999-2000 | 389 |
| 20. | 2000-01 | 406 |
| 21. | 2001-02 | 426 |
| 22. | 2002-03 | 447 |
| 23. | 2003-04 | 463 |
| 24. | 2004-05 | 480 |

| | | |
|-----|---------|-----|
| 25. | 2005-06 | 497 |
| 26. | 2006-07 | 519 |

[Notification no.270/2006 dated 19.9.2006]

- (2) Notification No.127/2006 dated 1.6.2006 – Notified plan for deduction in respect of annuity plan of LIC

| Notification No. | Date | In exercise of powers conferred by | Details |
|------------------|----------|------------------------------------|---|
| 127/2006 | 1.6.2006 | Section 80C(2)(xii) | Jeevan Akshay-III Plan of the LIC of India, as filed by the LIC with the IRDA, as the annuity plan of the LIC for the purposes of section 80C(2)(xii) |

- (3) Notification Nos. 142 & 143/2006 dated 29.6.2006 – Notified Bonds for the purpose of exemption of capital gains under section 54EC

The Central Government has notified bonds of National Highways Authority of India (NHAI) and Rural Electrification Corporation Limited (RECL), to be issued during the financial year 2006-07, redeemable after three years, as "long-term specified asset" for the purpose of exemption under section 54EC i.e. capital gains would be exempt to the extent of investment in these notified bonds.

The CBDT has, vide Order F.No.142/09/2006-TPL, dated 30.6.2006, extended the limitation period of six months for making investment under section 54EC of capital gains arising from the transfer of a long-term capital asset to –

- (i) 30.9.2006, in case of persons where the long-term capital asset was transferred between 29.9.2005 and 31.12.2005;
- (ii) 31.12.2006, in case of persons where the long-term capital asset was transferred between 1.1.2006 and 30.6.2006.

- (4) Notification No 380/2006, dated 22.12.2006 – Restriction of maximum investment to Rs.50 lakhs for the purpose of section 54EC

The Central Government has, vide this notification, notified the bonds for an amount of Rs.3,500 crores (redeemable after three years), to be issued by the Rural Electrification Corporation Limited (RECL) during the period between 26.12.2006 to 31.3.2007, as 'long-term specified asset' for the purposes of section 54EC subject to the following conditions, namely:-

- (i) a person who has made an investment of an amount aggregating more than Rs.50 lakh in the bonds of NHAI or RECL notified as long-term specified asset by the Central Government in the Official Gazette for the purposes of section 54EC vide notifications dated 29.6.2006, shall not be allotted any bonds notified as long-term specified asset by this notification;
- (ii) a person who is not covered by clause (i) above, shall not be allotted the bonds notified as long-term specified asset by this notification, for any amount which exceeds the amount of Rs.50 lakh as reduced by the aggregate of the investment, if any, made by him in the bonds of NHAI and RECL notified as long-term specified asset by the Central Government for the purposes of section 54EC of vide notifications dated 29.6.2006.

For example, if one Mr.X has been allotted bonds of NHAI or RECL (vide the above-referred notifications dated 29.6.2006), aggregating to say Rs.52 lakh, he shall not be allotted any further bonds by this notification. If one Mr.Y has been allotted bonds of NHAI or RECL(vide the above-referred notifications dated 29.6.2006) to the extent of say, Rs.30 lakhs, then the allotment of bonds of RECL vide this notification cannot exceed Rs.20 lakhs.

- (5) Notification No.187/2006 dated 20.7.2006 – Conditions to be fulfilled by a public facility to be eligible to be notified as an infrastructure facility in accordance with the provisions of clause (d) of the Explanation to section 36(1)(viii)

Rule 6ABAA has been inserted in the Income-tax Rules, 1962 which specifies the conditions to be fulfilled by a public facility to be eligible to be notified as an infrastructure facility in accordance with the provisions of clause (d) of the Explanation to clause (viii) of sub-section (1) of section 36. The conditions specified therein are -

- (a) it is owned by a company registered in India or by a consortium of such companies or by an authority or a board or a corporation or any other body established or constituted under any Central or State Act;
 - (b) it has entered into an agreement with the Central Government or a State Government or a local authority or any other statutory body for (i) developing or (ii) operating and maintaining or (iii) developing, operating and maintaining a new infrastructure facility similar in nature to an infrastructure facility referred to in the Explanation to section 80-IA(4)(i);
 - (c) it has started or starts operating and maintaining such infrastructure facility on or after 1st April, 1995.
- (6) Notification No. 188/2006, dated 20.7.2006 – Notification of public facilities as infrastructure facility for the purpose of section 36(1)(viii)

The following public facilities have been notified by the CBDT as infrastructure facility for purposes of section 36(1)(viii)-

- (1) Inland Container Depot and Container Freight Station notified under the Customs Act, 1962
 - (2) Mass Rapid Transit system
 - (3) Light Rail Transit system
 - (4) Expressways
 - (5) Intra-urban or semi-urban roads like ring roads or urban by-passes or flyovers
 - (6) Bus and truck terminals
 - (7) Subways
 - (8) Road dividers
 - (9) Bulk Handling Terminals which are developed or maintained or operated for development of rail system
 - (10) Multilevel Computerised Car Parking.
- (7) Notification No. 267/2006 dated 14.9.2006 – Notification of approved investment under section 11(5)

A new clause (v) has been inserted in rule 17C of the Income-tax Rules, 1962 so as to include as an approved investment under section 11(5), investment by a recognized Stock Exchange, in the equity shares of a company promoted by it to acquire the membership rights of other stock exchanges, where at least 51% of the paid-up share capital is held by the Stock Exchange and the balance is held by its members. The amendment is made effective retrospectively from 26th November, 1999.

- (8) Notification No.314/2006, dated 9.11.2006 – Rule 6DD to provide the cases and circumstances in which payment in a sum exceeding Rs.20,000 may be made otherwise than by an account payee cheque drawn on a bank or by account payee bank draft

Section 40A(3), provides for disallowance of 20% of the expenditure if payment in a sum exceeding Rs.20,000 is made, against such expenditure, otherwise than by a crossed cheque or crossed bank draft. The Taxation Laws (Amendment) Act, 2006 has amended section 40A(3) to require payments over Rs.20,000 to be made by an account payee cheque drawn on a bank or account payee bank draft.

Accordingly, the CBDT has amended Rule 6DD to replace the words “a crossed cheque” and “a crossed bank draft” with “an account payee cheque” and “account payee bank draft” respectively in the heading and content. Therefore, Rule 6DD would henceforth provide the cases and circumstances in which payment in a sum exceeding Rs.20,000 may be made otherwise than by an account payee cheque drawn on a bank or by account payee bank draft.

- (9) Notification No. 357/2006, dated 24.11.2006 - Restriction regarding effective period of approval for the purposes of section 10(23C)(vi) and (via) removed

The CBDT has, vide this notification, amended Rule 2CA, which provides the guidelines for approval under sub-clauses (vi) and (via) of section 10(23C). Sub-rule (3) of Rule 2CA, which restricts the effective period of approval of such university or other educational institution or hospital or other medical institution [covered under sub-clauses (vi)/(via)] by the CBDT or Chief Commissioner or Director General to a maximum of three assessment years, has now been amended to provide that such restrictions would apply only in respect of approvals granted before 1.12.2006.

- (10) Notification No. 358/2006, dated 28.11.2006 – Tax Return Preparer Scheme, 2006

The CBDT has, in exercise of the powers conferred by section 139B(1) of the Income-tax Act, 1961, framed the Tax Return Preparer Scheme, 2006, which came into force from 1.12.2006.

As per this scheme, Tax Return Preparer means any individual who has been issued a Tax Return Preparer Certificate and a unique identification number by the Partner Organisation to carry on the profession of preparing the returns of income in accordance with the provisions of this Scheme. However, the following persons are not eligible to act as a Tax Return Preparer -

- (i) any person referred to in clause (ii) or clause (iii) or clause (iv) of sub-section (2) of section 288, namely, any officer of a Scheduled Bank with which the assessee maintains a current account or has other regular dealings, any legal practitioner who is entitled to practice in any civil court in India and an accountant.
- (ii) any person who is in employment and income from which is chargeable to income-tax under the head salaries

Educational qualification for Tax Return Preparers

Any individual who holds a graduation degree from a recognized Indian University in the fields of Business Administration or Management or Commerce or Economics or Law or Mathematics or Statistics shall be eligible to act as Tax Return Preparer.

- (11) Notifications 369-374/2006 dated 15.12.2006 – Notification of Zero Coupon Bonds

Section 2(48) defining zero coupon bonds requires that such bonds should be notified by the Central Government. Accordingly, the Central Government has, vide Notifications 369-374 dated 15.12.2006, specified the following bonds to be issued on or before 31.3.2009 by HUDCO, SIDBI, NABARD and IDFC as zero coupon bonds –

- (i) 10 year zero coupon bonds of HUDCO, SIDBI, NABARD and IDFC
- (ii) 15 year zero coupon bonds of HUDCO.

- (12) Notification No.1/2007 dated 4.1.2007 – Exemption of interest on tax free municipal bonds issued by Nagpur Municipal Corporation

Section 10(15)(vii) exempts interest on bonds issued by a local authority, if such bonds are specified by the Central Government by notification in the Official Gazette. Accordingly, the Central Government has, vide this notification, specified Tax Free Municipal Bonds issued by Nagpur Municipal Corporation during the F.Y.2006-07, interest from which would be exempt under section 10(15)(vii). However, such benefit would be admissible only if the holder of such bonds registers his or her name and the holding with the Nagpur Municipal Corporation.

- (13) Notification No.2/2007 dated 11.1.2007 – Subscription to public deposit scheme of HUDCO to qualify for deduction under section 80C

Deduction under section 80C is available, inter-alia, in respect of any sum paid or deposited in the previous year by the assessee as subscription to any such deposit scheme of a public sector company which is engaged in providing long-term finance for construction or purchase of houses in India for residential purposes, as the Central Government may, by notification in the Official Gazette, specify in this behalf. This has been provided in clause (xvi)(a) of section 80C(2). Accordingly, the Central Government has, vide this notification, specified the Public Deposit Scheme of Housing and Urban Development Corporation Ltd., subscription to which would qualify for deduction under section 80C.

- (14) Notification No. 61/2007, dated 28.2.2007 – Investment by way of acquiring equity shares of an incubatee by an incubator to qualify as an approved investment under section 11(5)

Section 11(5) of the Income-tax Act, 1961 specifies the permitted modes of investment by a charitable trust or institution for claiming exemption under section 11. Clause (xii) of section 11(5) specifies that investment can be made by any other mode as may be prescribed. Rule 17C of the Income-tax Rules specifies such other modes of investment. The CBDT has, through the Income-tax (Second Amendment) Rules, 2007, which came into force on 1.3.2007, inserted new clause (vi) in Rule 17C. Clause (vi) specifies another mode of investment, namely, investment by way of acquiring equity shares of an incubatee by an incubator. Incubatee shall mean such incubatee as may be notified by the Government of India in the Ministry of Science and Technology and incubator shall mean such Technology Business Incubator or Science and Technology Entrepreneurship Park as may be notified by the Government of India in the Ministry of Science and Technology.

- (15) Notification No. 67/2007, dated 8.3.2007 – Exemption of interest on Tax Free Municipal Bonds issued by Ahmedabad Municipal Corporation

Sub-clause (vii) of section 10(15) exempts interest on bonds issued by a local authority, if such bonds are specified by the Central Government by notification in the Official Gazette. Accordingly, the Central Government has, vide this notification, specified Tax Free Municipal Bonds issued by Ahmedabad Municipal Corporation during the financial year 2006-07, interest from which would be exempt under section 10(15)(vii). However, this benefit shall be admissible only if the holder of such bonds registers his or her name and the holding with the said Corporation.

II CIRCULARS

- (1) Circular No.7/2006 dated 17.7.2006 - Clarification regarding deduction of interest under section 43B in view of clarificatory amendments to section 43B through the Finance Act, 2006

Section 43B was amended by the Finance Act, 2006 inserting therein two clarificatory Explanations, namely, Explanation 3C and Explanation 3D. Both the Explanations clarify that any sum payable by the assessee as interest on any loan or borrowing or advance shall be allowed as deduction if such interest has been actually paid and any interest which has been converted into a loan or borrowing or advance but has not been actually paid shall not be allowed as deduction in the computation of income. The clarificatory explanations only reiterate the rationale that conversion of interest into a loan or borrowing or advance does not amount to actual payment.

The manner in which the converted interest will be allowed as deduction has been clarified in this circular. The unpaid interest, whenever actually paid to the bank or financial institution, will be in the nature of revenue expenditure deserving deduction in the computation of income. Therefore, irrespective of the nomenclature, the deduction will be allowed in the previous year in which the converted interest is actually paid.

- (2) Circular No. 8/2006, dated 6.10.2006 - Clarification regarding the meaning of the expression "the produce of animal husbandry" used in sub-clause (ii) of clause (f) of rule 6DD of the Income-tax Rules, 1962

The CBDT had, vide Circular No. 4/2006, dated 29th March, 2006 on the above subject, clarified that the expression "the produce of animal husbandry" used under rule 6DD(f)(ii) would include livestock and meat and in a case where payment exceeding rupees twenty thousand is made to a producer of the products of animal husbandry (including livestock, meat, hides and skins) otherwise than by a crossed cheque drawn on a bank or by a crossed bank draft for the purchase of such produce, no disallowance would be attracted under section 40A(3) read with rule 6DD. It was further clarified that the above exception will not be available in respect of payment for the purchase of livestock, meat, hides and skins from a person who is not proved to be the producer of these goods and is only a trader, broker or any other middleman by whatever name called.

This circular (Circular No.8/2006) gives a clarification as to -

- (i) who are the producers of livestock and meat and
- (ii) the evidence required to be furnished in this regard by the persons making the payments.

The CBDT is of the view that any person, by whatever name called, who buys animals from the farmers, slaughters them and then sells the raw meat carcasses to the meat processing factories or to the traders/retail outlets would be considered as a producer of livestock and meat.

The benefit of rule 6DD of the Income-tax Rules, 1952 shall be available to the person referred to in the above para subject to furnishing of the following :

- (i) A declaration from the person receiving the payment that he is a producer of meat;
- (ii) A confirmation that the payment, otherwise than by an account payee cheque or account payee bank draft, was made on his insistence; and
- (iii) A further confirmation from a veterinary doctor certifying that the person specified in the certificate is a producer of meat and that slaughtering was done under his supervision.

- (3) Circular No.10/2006 dated 16.10.06 - Clarification regarding filing of return of income by the coffee growers being individuals covered by Rule 7B of the Income tax Rules, 1962

The CBDT, vide Circular No. 10/2003 dated 24th December, 2003, had provided that an individual deriving income from growing and curing of coffee, who is not covered by the first proviso to section 139(1), would not be required to file a return of his income if his income from growing and curing of coffee was Rs.2 lakhs or less. The Finance Act, 2005 has subsequently raised the exemption limit for individual taxpayers from Rs. 50,000 to Rs.1 lakh from the A.Y. 2006-07. The exemption limit in the case of an individual, being a woman resident in India and below the age of 65 years, has been increased to Rs.1,35,000. In the case of an individual, being a resident in India, who is of the age of 65 or more at any time during the previous year, the exemption limit has been raised to Rs.1,85,000. Therefore, the CBDT has reconsidered the matter of filing of return by the individual coffee growers in order to provide further relief to them and it is clarified that:

- (i) An individual deriving income from growing and curing of coffee would not be required to file his return, if the aggregate of 25% of his income from growing and curing of coffee and income under all other sources liable to tax in accordance with the provisions of this Act, is equal to or less than the exemption limit (1st slab of the rates of income-tax) prescribed for individual tax payers in the First Schedule of the Finance Act of the relevant year.
- (ii) An individual deriving income from growing, curing, roasting and grounding of coffee with or without mixing chicory or other flavouring ingredients, would not be required to file the return of income if the aggregate of 40% of his income from growing, curing, roasting and grounding of coffee with or without mixing chicory or other flavoring ingredients and income under all other sources liable to tax in accordance with the provisions of this Act, is equal to or less than the exemption limit (1st slab of rates of Income tax) prescribed in the First Schedule of the Finance Act of the relevant year.

RECENT AMENDMENTS IN INCOME TAX AND CENTRAL SALES TAX

Students are advised to study thoroughly the Supplementary Study Paper-2006 on Income-tax and Central Sales-tax for the PE-II Course. This contains the amendments made by the Finance Act, 2006 as well as the important notifications/circulars/other legislative amendments between 1-5-05 and 30-4-06. This Supplementary Study Paper is available at the branch and regional sales counters of the Institute. This RTP contains the amendments made between 1-5-06 and 30-4-07 through notifications/circulars/other legislations. It is very important to have good knowledge of the latest amendments since considerable weightage is being given to the latest amendments in the examinations.

PAPER – 6 : INFORMATION TECHNOLOGY

QUESTIONS

1. Define the following terms briefly:

| | | |
|------------------------------|------------------------|-----------------------------|
| (a) Data | (b) Information | (c) Data Processing |
| (d) EDP | (e) ALU | (f) Secondary Storage |
| (g) ASCII System | (h) Flash Memory | (i) Voice Recognition |
| (j) FAT | (k) Data Integrity | (l) Data Dictionary |
| (m) Artificial Intelligence | (n) Simplex | (o) Multiplexer |
| (p) Clock Speed | (q) Integrated Circuit | (r) Interleaving Techniques |
| (s) Synchronous Transmission | (t) Bridges | (u) URL |
2. Give one or two usages or reasons for each of the following:

| | |
|------------------------------|------------------------------|
| (a) Uses of expansion slot | (b) Uses of graph plotter |
| (c) Uses of worm disk | (d) Uses of virtual memory |
| (e) Uses of utility programs | (f) Use of expert systems |
| (g) Uses of NIC | (h) Uses of data centres |
| (i) Uses of decision table | (j) Uses of wireless network |
| (k) Uses of http | (l) Uses of teleconferencing |
3. Distinguishes between the following:
 - (a) Analog and Digital computer
 - (b) Mini and Micro computer
 - (c) Data bus and Address bus
 - (d) RAM and ROM
 - (e) MICR and OCR
 - (f) Impact and Non-impact printer
 - (g) Interpreter and Compiler
 - (h) Multiprogramming and Multiprocessing
 - (i) Distributed Database and OO Database
 - (j) Batch System and Real Time System
 - (k) Message and Packet Switching
 - (l) Intranet and Internet.
4. Convert the following from one number system to another number system along with the working notes:
 - (1) $(945)_{10} = (\quad)_2$
 - (2) $(101101.110) = (\quad)_{10}$
 - (3) $(2352)_8 = (\quad)_{10}$
 - (4) $(1592)_{10} = (\quad)_8$
 - (5) $(5EB)_{16} = (\quad)_2$
 - (6) $(84C.25)_{16} = (\quad)_{10}$
 - (7) $(101110.101)_2 = (\quad)_8$

$$(8) (467)_8 = (\quad)_2$$

$$(9) (1101.011)_2 = (\quad)_{16}$$

$$(10) (766)_8 = (\quad)_{16}$$

5. (a) What do you mean by Computer? Describe in brief various generation of Computer.
(b) Explain different component of computer system in brief. Discuss advantages and disadvantages of the computer system.
6. (a) What do you mean by software? Explain different types of software in brief.
(b) What are the advantages and disadvantages of direct access storages.
(c) What do you mean by operating system? Explain each function of Operating system in brief.
7. (a) What do you mean by DBMS? Describe various function of DBMS in brief.
(b) What are the advantages and disadvantages of DBMS in brief.
8. (a) What do you mean by DSS? Explain the different components of DSS.
(b) Write a short notes on direct attached storage (DAS).
(c) Discuss the different types of network in data communication? Explain salient features of each.
9. (a) What is e-commerce? Describe the different benefits of e-commerce in business.
(b) What is EDI (Electronic Data Interchange)? Discuss the advantages of EDI.
10. (a) What are the important issues that influence the physical design of a database?
(b) What are the major area that effects the performance of the data base.
11. Draw a flow chart to compute and print income-tax and surcharge on the income of a person, where income is to be read from terminal and tax is to be calculated as per the following rates:

Upto Rs. 40,000 No tax

Upto Rs. 60,000 @ 10% of amount above Rs. 40,000

Upto Rs. 1,50,000 Rs. 2,000 + 20% of amount above Rs. 60,000

Above Rs. 1,50,000 Rs. 20,000 + 30% of amount above Rs. 1,50,000

Charge surcharge @ 2% on the amount of total tax, if the income of a person exceeds Rs. 2,00,000.
12. The details of procedure for dealing with delivery charges for goods bought from HLL Company is given below :

For calculating the delivery charges, customers are divided into two categories, those whose sales region code is 10 or above and those with the code of less than 10.

If the code is less than 10 and the invoice amount is less than Rs. 10,000, the delivery charge to be added to the invoice total is Rs. 200. But if the invoice value is for Rs. 10,000 or more, the delivery charge is Rs. 100.

If the code is equal to or greater than 10, the corresponding delivery charges are Rs. 250 and Rs. 150 respectively.

Prepare a decision table of the above procedure
13. What is mail-merge? Write different steps to create the mail-merge document in brief.
14. What are the various features that are used to create the chart in MS-Excel. Give suitable example.
15. Write the step for creating and using a macro in the spreadsheet.
16. (a) What is CAAT? What are the different white box and black box audit approach.
(b) Write a short notes on audit software.

- (c) What are the major steps used in CAATs.
17. Describe the steps for the following with preference to the Tally Accounting package.
- Stock item
 - Purchase entry
 - OLE automation support
 - Smart finder
18. Define the following (MS-Word)
- Numbers and Bullets
 - Thesaurus
19. Define the following (MS-Excel)
- Excel Functions
 - Print Setting
20. Define the following (MS-PowerPoint)
- Handouts and Notes
 - Design Template

SUGGESTED ANSWERS/HINTS

1. (a) Data: Data can be defined as any fact, observation, assumption or occurrence. They are useful knowledge or information of value to an individual or business. They are factual material used as a basis for discussion, decision, calculation, or measurement. Data are compiled to form reports, figures, or documents etc.
- (b) Information : Information is organised or classified data so that it has some surprise value to the receiver. For example, the daily production figures are raw data for the managing director to whom they have little value as such.
- (c) Data Processing : is the restructuring or reordering of data by people or machines, to increase their usefulness and value for some particular purpose.
- (d) EDP : offers better method of data processing at a low cost per unit processing as it relies on the computer and principles of electronics for processing data. Data to be processed by this method can be recorded on one of the several media for input.
- (e) Arithmetic and logic unit (ALU): performs mathematical calculations, compares numeric and non-numeric values and makes decisions. The data flows between this unit and the storage unit during processing.
- (f) Secondary Storage: Because the primary storage capacity of most computers is limited, it is both expensive and not always possible to hold a large volume of data and instructions in the primary storage. Hence it becomes necessary to have secondary or auxiliary storage for holding data and programs not currently in use
- (g) ASCII System: the American Standard Code for Information Interchange, called the ASCII Code uses the right most seven bits of the 8-bit byte to represent numbers, letters of the alphabet, and special characters. This provides for the representation of a maximum of 128 individual characters.
- (h) Flash memory: It is a form of static RAM (SRAM) chips, store data much like those used in the computer's primary storage. However, the data stays recorded even when the power is turned off flash memory is non-volatile. Since flash memory devices have no moving parts, and are therefore very fast, they may eventually replace slower, mechanical hard disk drives.

- (i) Voice Recognition: Translating voice to text is a capability known as voice recognition (or speech recognition). Voice recognition software takes the smallest individual sounds in a language, called phonemes, and translates them into text or commands.
 - (j) FAT: It is a log that records the location of each file and the status of each sector. When a file is written to a disk, the operating system checks the FAT for an open area, stores the file, and then identifies the file and its location in the FAT.
 - (k) Data Integrity: refers to the correctness of the data into the database. The results from the fact that updates to data stored in one file may be made to the other files containing the same data.
 - (l) Data Dictionary: Data dictionary is a centralized depository of information, in a computerized form, about the data in the database. The data dictionary contains the scheme and description of the database.
 - (m) Artificial intelligence (AI): is software that tries to emulate aspects of human behavior, such as reasoning, communicating, seeing, and hearing. AI software can use its accumulated knowledge to reason and, in some instances, learn from experience and thereby modify its subsequent reasoning.
 - (n) Simplex: A simplex communication mode permits data to flow in only one direction. A terminal connected to such a line is either a send-only or a receive only device.
 - (o) Multiplexer : This device enables several devices to share one communication line. The multiplexer scans each device to collect and transmit data on a single line to the CPU.
 - (p) Clock Speed: The clock speed is the speed at which the processor executes instructions. Clock speed is measured in megahertz (MHz)—which is a million cycles per second.
 - (q) Integrated Circuit: The very thin silicon chip contains a number of small storage cells that can hold data. Instead of being made up of a series of discrete components, these units are constructed as integrated circuits, meaning that a number of transistors are integrated or combined together on a thin silicon wafer to form a complete set of circuits
 - (r) Interleaving Techniques: A technique large computer systems often combine (interleave) the processing work of multiple simultaneous users or applications in a manner that achieves the highest possible resource efficiency. Among the interleaving techniques commonly used are multiprogramming, foreground/background processing, multi-tasking, virtual memory, and multi-processing.
 - (s) Synchronous Transmission: This transmission, bits are transmitted at fixed rate. The transmitter and receiver both use the same clock signals for synchronisation.
 - (t) Bridges: The main task of a bridge computer is to receive and pass data from one LAN to another. In order to transmit this data successfully, the bridge magnifies the data transmission signal.
 - (u) URL: is the standard way to give the address of any resources on the internet that is part of the world wide web.
2. (a)
 1. To give built -in devices such as hard disks and diskette drives access to the computer's bus via controller cards.
 2. To provide I/O (input/output) ports on the back of the computer for external devices such as monitors, external modems, printers, and the mouse (for computers that do not have a built-in mouse port).
 - (b)
 1. Graph plotter is a device capable of tracing out graphs, designs and maps into paper and even into plastic or metal plates. This device is suitable for routine graph plotting and also for fashion designs.
 2. Business generally uses plotters to present an analysis in visual terms (bar charts, graphs, diagrams) etc. as well as for engineering drawings.

- (c) 1. These are used by end user companies to store their own proprietary information.
- 2. WORM disks is used in information systems that require the merging of text and images that do not change for a period of time.
- (d) 1. Virtual memory systems, sometimes called virtual storage systems, extend primary memory by treating disk storage as a logical extension of RAM.
- 2. The virtual memory feature allows him to consider unlimited memory size to the programmer, though not in physical term.
- (e) 1. Sorting and Editing the output data.
- 2. Converting data from one recording medium to another, viz., floppy disk to hard disc, tape to printer, etc.
- (f) 1. They can outperform a single expert because their knowledge is representative of numerous experts. They are faster and more consistent and do not get distracted, overworked, or stressed out.
- 2. They produce better-quality and more consistent decisions. Expert systems assist users in identifying potential decision making problems, which increases the probability that sound decisions will be made.
- (g) 1. Network interface cards (NIC) provide the connection for network cabling to servers and workstations.
- 2. An NIC has additional memory for buffering incoming and outgoing data packets, thus improving the network throughput.
- (h) 1. A database monitoring is done by the database agent, which enables the high availability of the database through comprehensive automated management.
- 2. It is used to monitor the website performance, availability, integrity and the responsiveness from a site visitor's prospective.
- (i) 1. A decision table provides a framework for a complete and accurate statement of processing or decision logic. It forces a discipline on the programmer to think through all possible conditions.
- 2. A decision table is compact and easily understood making it very effective for communication between analysts or programmers and non-technical users. Better documentation is provided by it.
- (j) 1. one is the portable office. People on the road may often want to use their portable electronic equipment to send and receive telephone calls faes and electronic mail, read remote files, logic on remote machines and can so on and do this from anywhere on land, sea or air.
- 2. Wireless networks are of great value to fleets of trucks, taxis, buses and repair-persons for keeping in touch with home. Another use is for rescue workers at disaster sites (fires, floods, earthquakes, etc.) where the telephone system has been destroyed, computers there can find messages, keep records and so on.
- (k) 1. HTTP is used to process information to and from the Web server; pages.
- 2. Using HTTP, HTML provides the capability to specify graphic files to be displayed.
- (l) The use of teleconferences is that they allow collaboration by people not in the same location. For example, one could hold a teleconference with participants in different countries. This eliminates the need for everyone to travel to the same location.
- 3. (a) Analog computers process data input in a continuous form. Data such as voltage, resistance or temperature and pressure are represented in the computer as a continuous, unbroken flow of information. The analog computer offers low cost and ease in programming. The main disadvantage of an analog computer is its accuracy factor, and the limited storage capacity. Hence it is not suitable for processing business data.

Digital computers on the other hand, count and accept letters or numbers through various input devices that convert the data into electric pulses, and performs arithmetic operations on numbers in discrete form. In addition to performing arithmetic operations, they are also capable of (1) storing data for processing, (2) performing logical operations, (3) editing or deleting the input data and (4) printing out the result of its processed routine at high speed. One of the main advantages in the use of digital computers is that any desired level of accuracy can be achieved by considering as many places of decimal as is necessary and hence are most suitable for business applications. The main disadvantage of digital computers is their high cost and the complexity in programming.

- (b) Mini computer performs data processing activities in the same way as the micro computer but on a larger scale. Originally minicomputers were developed for process control and system monitoring etc. They were complicated to program and had minimal input/output capabilities as they were mainly concerned with “number crunching” rather than handling large amounts of data relating to business transactions. However, they are now fully developed, powerful computers with a wide range of peripherals to perform a wide range of data processing and computing activities. Minicomputer systems can be equipped with most of the input/output (I/O) devices and secondary storage devices that the large mainframe systems can handle, such as terminals and rigid disks. They are also making possible the installation of distributed data processing systems.

Microcomputers: A microcomputer is a full-fledged computer system that uses a microprocessor as its CPU, these are also called personal computer systems. a micro-computer often called a micro is a small computer consisting of a processor on a single silicon chip which is mounted on a circuit board with other chips containing the computer’s internal memory in the form of read-only-memory (ROM) and random-access-memory (RAM). It has a keyboard for the entry of data and instructions and a screen for display purposes. It has interface for the connection of peripherals in the form of mouse, plotters, printers, cassette units, disk drives and light pens etc. IBM PC, APPLE II, TENDY TRS-80 are some of the popular microcomputers. Microcomputer systems are used by even the smallest of business.

- (c) Data Bus is an electrical path that connects the CPU, memory, and the other hardware devices on the motherboard. Actually, the bus is a group of parallel wires. The number of wires in the bus affects the speed at which data can travel between hardware components, just as the number of lanes on a highway affects how long it takes people to get to their destinations. Because each wire can transfer one bit at a time, an eight-wire bus can move eight bits at a time, which is a full byte. A 16-bit bus can transfer two bytes, and a 32-bit bus can transfer four bytes at a time.

Address Bus: The address bus is a set of wires similar to the data bus that connects the CPU and RAM and carries the memory addresses. (Remember, each byte in RAM is associated with a number, which is the memory address). The reason the address bus is important is that the number of wires in it determines the maximum number of memory addresses. For example, recall that one byte of data is enough to represent 256 different values. If the address bus could carry only eight bits at a time, the CPU could address only 256 bytes of RAM.

- (d) **Random-Access-Memory (RAM):** The memory system constructed with metal-oxide semi conductor storage elements that can be changed is called a random access memory (RAM). The purpose of RAM is to hold programs and data while they are in use. It is called random access memory since access time in RAM is independent of the address of the word, that is, each storage location (address) inside the memory is as easy to reach as any other location and takes the same amount of time. RAMs can be further divided according to the way in which the data is stored, into dynamic RAMs and static RAMs.

Read-Only-Memory (ROM) : It is used for microprograms not available to normal programmers. The term read-only means that the storage cannot be altered by regular program instructions. The information is stored permanently in such memory during

manufacture. The information from the memory may be read out but fresh information cannot be written into it. The microprograms in read-only-memory may be used for a variety of purposes, but a common use is to hold a set of instructions that are needed frequently, for executing small, extremely basic operations, which are not otherwise available in the computer circuitry. One set of instructions found in ROM is called the ROM-BIOS which stands for Read-only Memory Basic Input Output services. Three types of ROM are PROM, EPROM and EEPROM.

- (e) Magnetic Ink Character Recognition (MICR): MICR employs a system of printed characters which are easily decipherable by human beings as well as a machine reader. There is used special printing font to represent characters. In this font, each character is basically composed of vertical bars. The characters are printed in special ink, which contains a magnetizable material. When a character is subsequently read it is passed beneath a reading head and big and small gaps send in different types of impulses represented by 1 bit and 0 bit respectively. This method is primarily used in banking industry, and most cheques are now processed under the MICR approach.

Optical Character Reading (OCR) : OCR also employs a set of printing characters with standard font that can be read by both human and machine readers. The machine reading is done by light scanning techniques in which each character is illuminated by a light source and the reflected image of the character is analysed in terms of the light-dark pattern produced. Key-board devices are used to give the required print quality. OCR has the potential of reading even handwritten documents straightway.

Optical character readers can read upper and lower case letters, numerics and certain special characters from handwritten, typed and printed paper documents. The specific characters that can be read and whether the characters must be handwritten, typed or printed depends upon the type of OCR being used. Large volume billing applications (e.g. the bills of utility companies, credit-card organisations, and magazine subscription outfits) increasingly are being adapted to OCR methods. The customer paying the bill returns the bill, which has OCR data (e.g. customer number and amount of the bill) recorded on it, along-with payment.

- (f) Impact printers: Impact printers can be described as printers which utilize some form of striking device to transfer ink from an inked ribbon onto the paper being printed to form images or characters. The characters printed are formed by one of two methods: (i) they are either distinct, whole alphanumeric images produced by a process known as full character or formed character printer or, (ii) they are formed by a dot matrix method which arranges a series of dots to assume the shape of each character being printed.

Non-impact printers: A non-impact printer forms characters by chemical or electronic means. Three types of non-impact printers are These are thermal printers, ink-jet printers and laser printers. They are fast in operation, printing a page, or even more in a second but currently they are too expensive to be widely used. The laser printer produces very high quality prints from a wide selection of character fonts.

- (g) Compilers: A compiler translates the entire program into machine language before the program is executed. Compilers are most commonly used to translate high-level languages such as COBOL, FORTRAN, and Pascal. Compilers typically result in programs that can be executed much more swiftly than those handled by interpreters.

Interpreters: Whereas compilers translates programs into machine language all at once before programs are run, interpreters translate programs a line at a time as they are being run. With an interpreter, each statement is translated into machine language just before it is executed. No object module or storable load module is ever produced. Although interpreters have the glaring weakness of inefficiency because they translate statements over and over, they do have some advantages over compilers. First, they are usually easier and faster to use, since the user is not bothered with distinct and time-consuming compile, link-edit, and execution stages. Second, they typically provide users with superior error messages. Third,

an interpreter for a 3GL typically requires less storage space in primary memory than a compiler for that language. So they may be ideal for programming environments in which main memory is limited, such as on low-end microcomputers. Fourth, interpreters are usually less expensive than compilers.

- (h) Multiprogramming - Multiprogramming is defined as execution of two or more programs that all reside in primary storage. Since the CPU can execute only one instruction at a time, it cannot simultaneously execute instructions from two or more programs. However, it can execute instructions from one program then from second program then from first again, and so on. This type of processing is referred to as "concurrent execution".

Multiprocessing: Multiprocessing (or parallel processing) refers to the use of two or more central processing units, linked together, to perform coordinated work simultaneously. Instructions are executed simultaneously because the available CPUs can execute different instructions of the same program or of different programs at any given time. multiprocessing offers data-processing capabilities that are not present when only one CPU is used. Many complex operations can be performed at the same time. CPU can function on complementary units to provide data and control for one another.

- (i) Distributed Database: When computing resources and database are scattered rather than centralised, they are called distributed data processing and distributed database systems. Distributed data processing refers to a system in which computer intelligence is located at more than one site and the actual running of application programs and processing of data are completed at more than one site. Distributed data processing may save a lot of time and money for an organisation. When processing is distributed, the data to be processed usually must be located at the processing site. This means that the data base, or parts of the data base, must be distributed. Distributed database systems usually reduce costs for an organisation because they reduce transfer of data between remote sites and the organisation's headquarters. Distributed database systems may also provide organisations with faster response times for filling orders, answering customer requests, or providing managers with information. They compound the problem of control over the database, increase problems of security for the database, increase data redundancy and the resulting danger to data integrity and increase the need for more computer resources.

Object-Oriented Databases: Object-oriented databases (OODB) are a natural extension of OOP. Like other database management systems, OODB systems can be either active or passive - we will focus on active systems. Every object is described by a set of attributes describing what the object is (for example, a set of program code for an expert system, a data flow diagram, or a CAD design for a new product). Objects with similar attributes and behaviours can be grouped into classes and the attributes and behaviours of one object within a class can be inherited by other objects within the same class, which can speed up application development.

- (j) Batch Processing: A batch of transactions is accumulated, batch totals compiled for it, the transactions transcribed on floppy diskette or other media, the floppy diskette file sorted by the key field and processed against the master file to update the latter and produce the desired outputs.

Real Time System: The term real time refers to the technique of updating files with transaction data immediately after the event to which it relates occurs. This is in distinction to batch processing which processes related data in batches at pre-defined periods of time. Real time systems are basically on-line system with one speciality in inquiry processing. The response of the system to the inquiry itself is used to control the activity. the system is designed to provide immediate information to monitor the production processes, it is a real-time system. Real-time systems usually operate in multi programming and multi processing. This increases both availability and reliability of the system. CPU's in real time systems should possess the capability of what is known as program interrupts.

- (k) **Message Switching:** Some organisations with a heavy volume of data to transmit use a special computer for the purpose of data message switching. The computer receives all transmitted data; stores it; and, when an outgoing communication line is available, forwards it to the receiving point.

Packet switching: This is accomplished by breaking a message into transmission units, called packets, and routing them individually through the network depending on the availability of a channel for each packet. Passwords and all types of data can be included within the packet and the transmission cost is by packet and not by message, routes or distance. Sophisticated error and flow control procedures are applied on each link by the network.

- (l) **Intranets:** The Intranet is a type of information system that facilitates communication within the organisation, among widely dispersed departments, divisions, and regional locations. Intranets connect people together with Internet technology, using Web Browsers, Web Servers and Data Warehouses in a single view. With an Intranet, access to all information, applications and data can be made available through the same browser. The objective is to organise each individual's desktop with minimal cost, time and effort to be more productive, cost-efficient, timely and competitive.

Internet: an internet is a collection of network formed together to share the data on the web. World Wide Web (WWW) and the Internet continue to grow in importance as a primary business-transaction delivery system. Through the Internet, users can have online interactive communication. At pre-defined timings, those who have to communicate together can be online through Internet and have electronic conferences. This will be truly "many to many". Similarly, many discussions can be done through a forum where people post messages for each other and respond to them periodically. This is similar to having a bulletin board on which everyone posts messages.

4. (i) $(945)_{10} = (\quad)_2$

| | | |
|---|-----|---|
| 2 | 945 | |
| 2 | 472 | 1 |
| 2 | 236 | 0 |
| 2 | 118 | 0 |
| 2 | 59 | 0 |
| 2 | 29 | 1 |
| 2 | 14 | 1 |
| 2 | 7 | 0 |
| 2 | 3 | 1 |
| 2 | 1 | 1 |
| | 0 | 1 |

$$(945)_{10} = (1110110001)_2$$

(ii) $(101101.110)_2 = (\quad)_{10}$

$$\begin{aligned}
 &= 1 \times 2^5 + 0 \times 2^4 + 1 \times 2^3 + 1 \times 2^2 + 0 \times 2^1 + 1 \times 2^0 + 1 \times 2^{-1} + 1 \times 2^{-2} + 0 \times 2^{-3} \\
 &= 32 + 0 + 8 + 4 + 0 + 1 + \frac{1}{2} + \frac{1}{4} + 0 \\
 &= 45 + 0.5 + 0.25 + 0 \\
 &= 45.75
 \end{aligned}$$

$$(101101.110)_2 = (45.75)_{10}$$

$$\begin{aligned} \text{(iii)} \quad (2352)_8 &= (\quad)_{10} \\ &= 2 \times 8^3 + 3 \times 8^2 + 5 \times 8^1 + 2 \times 8^0 \\ &= 1024 + 192 + 40 + 2 \end{aligned}$$

$$(2352)_8 = (1258)_{10}$$

$$\text{(iv)} \quad (1592)_{10} = (\quad)_8$$

| | | |
|---|------|---|
| 8 | 1592 | |
| 8 | 199 | 0 |
| 8 | 24 | 7 |
| 8 | 3 | 0 |
| | 0 | 3 |

$$(1592)_{10} = (3070)_8$$

$$\text{(v)} \quad (5EB)_{16} = (\quad)_2$$

To convert the given number from Hexadecimal number system to Binary number system, each digit of the number will be represented in Binary form using a group of four bits.

$$= 0101 \ 1110 \ 1011$$

$$(5EB)_{16} = (10111101011)_2$$

$$\text{(vi)} \quad (84C.25)_{16} = (\quad)_{10}$$

$$\begin{aligned} &= 8 \times 16^2 + 4 \times 16^1 + C \times 16^0 + 16^{-1} \times 2 + 16^{-2} \times 5 \\ &= 2048 + 64 + 12 \times 1 + .0625 \times 2 + .00390625 \times 5 \\ &= 2048 + 64 + 12 + .13 + .02 \end{aligned}$$

$$(84C.25)_{16} = (2124.15)_{10}$$

$$\text{(vii)} \quad (101110.101)_2 = (\quad)_8$$

To convert the given number from Binary number system to Octal number system, each digit of the number will be represented in octal form using a group of 3 digit.

$$\begin{aligned} &= 101 \ 110 \ 101 \\ &= 5 \quad 6 \quad 5 \end{aligned}$$

$$(101110.101)_2 = (56.5)_8$$

$$\text{(viii)} \quad (467)_8 = (\quad)_2$$

To convert the given number from Octal number system to Binary number system, each digit of the number will be represented in Binary Form using a group of 3 digit.

$$= 100 \ 110 \ 111$$

$$(467)_8 = (100110111)_2$$

$$\text{(ix)} \quad (1101.011)_2 = (\quad)_{16}$$

To convert the given number from Binary number system to Hexadecimal no. system, each digit of the number will be represented in Hexadecimal form using a group of 4 digit.

$$= 1101 \ 0110$$

$$(1101.011) = (D6)_{16}$$

$$(x) (766)_8 = (\quad)_{16}$$

To convert the given number from Octal number system to Hexadecimal number system, first convert it into Decimal Number System and then the Decimal Number will be represented in Hexadecimal Form

$$\begin{aligned} &= 7 \times 8^2 + 6 \times 8^1 + 6 \times 8^0 \\ &= 7 \times 64 + 6 \times 8 + 6 \times 1 \\ &= 448 + 48 + 6 \\ &= (502)_{10} \end{aligned}$$

| | | |
|----|-----|----|
| 16 | 502 | |
| 16 | 31 | 6 |
| 16 | 1 | 15 |
| | 0 | 1 |

$$(766)_8 = (1F6)_{16}$$

5. (a) The term "computer" can logically be applied to any calculating machine. Computer as an electronic data processing device capable of receiving input, storing sets of instructions for solving problems and generating output with high speed and accuracy. Computers are composed of switches, wires, motors, transistors and integrated circuits, assembled on frames. The frames form components such as keyboards, printers, visual display unit, disk drives, magnetic tape drives, and central processing units. These components are wired together into a network called a computing system, often called a computer.

| Generation | Years | Switching device | Storage device | Switching* time | Software | Applications |
|------------------------|--------------|--|---|-----------------------|---|---|
| First | 1949-55 | Vacuum tubes | Acoustic delay lines and later magnetic drum. | 0.1 to 1 milli-second | Machine and assembly languages Simply monitors | Mostly scientific Later simple business systems |
| Second | 1956-65 | Transistors | Magnetic core main memory, | 1 to 10 micro seconds | High level language. FORTRAN, COBOL, Algol, Batch operating systems. | Extensive business applications Engineering design optimization scientific research. |
| Third | 1966-75 | Integrated Circuits(IC) | High speed magnetic cores Large disks (100 MB). 1 Mbyte main memory | 0.1 to micro second | FORTRAN IV, COBOL 68. PL/1 Time shared operating systems | Data base management systems, online systems |
| Fourth - First decade | 1975-84 | Large scale integrated circuits. Micro-processors (LSI) | Semiconductor memory Winchester disk 10Mbyte main memory. 1000 Mbytes disks | 10 to 100 | FORTRAN 77, Pascal ADA, COBOL-74, Concurrent processing | Personal computers. Distributed systems. Integrated CAD/CAM Real time control Graphics oriented systems |
| Fourth - Second decade | 1985-present | Very large scale integrated circuits. Over 3 million transistors per chip | Semiconductor memory. 1GB main memory. 100 GB disk | 1 to 10 nano-seconds | C, C++. JAVA, PROLOG Miranda, FP | Simulation, visualisation, Parallel computing, Virtual reality. Multimedia |

- (b) The components of this system could be called input, processing, output and memory. Computers are also systems, as such, are similar in many ways to the human organism. Input, processing, output, and storage are also elements of the computer system. Each of these units performs specific functions which are enumerated below:

Input: The entry of program statements and data into a computer occurs by means of an input device. Some of the more common input devices are keyboard, floppy disk drives and cartridge tape device.

Central processing unit: The heart of any computer is the central processing unit (CPU). It is this central processor that makes comparisons, performs calculations, reads, interprets and controls the execution of the instructions. It consists of two separate sub-units.

- (1) The control unit;
- (2) The arithmetic logic unit;

Control Unit : The control unit, as the name implies, supervises the operations of the entire computer. It selects the program statement from the storage unit, interprets the statement and sends the appropriate electronic impulses to the arithmetic/logic and storage units to cause these units to carry out the operations required.

Arithmetic/Logic Unit: Arithmetic and logic unit performs mathematical calculations, compares numeric and non-numeric values and makes decisions. The data flows between this unit and the storage unit during processing. Specifically, data is transferred as needed from the storage unit to the arithmetic/logic unit, manipulated and returned to the storage unit.

Storage: The storage, or primary memory section of the computer consists of the devices used to store the information which will be used during the computations. The storage section of the computer is also used to hold both intermediate and final results as the computer proceeds through the program. Common storage devices are bubble memory, RAM chips etc.

Secondary Storage: Because the primary storage capacity of most computers is limited, it is both expensive and not always possible to hold a large volume of data and instructions in the primary storage. Hence it becomes necessary to have secondary or auxiliary storage for holding data and programs not currently in use. The various secondary storage devices are the magnetic tape drives and magnetic disk drives.

Output devices: Output devices like input units are instruments of communication between people and machines. They are used to record the results obtained by the computer and present them to the outside world. The most commonly used output devices are printers, graph-plotters, magnetic disc drives, visual display unit etc.

6. (a) The word "software" has been coined to differentiate between the computer equipment (i.e., the hardware) and the means of controlling the equipment. A software is a collection of programs that perform certain task.

There are basically three types of software: Systems software, applications software and general-purpose software.

- (i) Systems Software

System software is a generic term referring to any computer software which manages and controls the hardware so that application software can perform a task. It is an essential part of the computer system. It comprises of those programs that control and support the computer system and its data processing applications. It includes the following:

Programming languages.

Operating systems.

Subroutines.

Utility programs.

Diagnostic routines.

Language translators.

(ii) Application Software

Application software is a subclass of computer software that employs the capabilities of a computer directly to a task that the user wishes to perform

The program usually solves a particular application or problem that is unique to that organisation. Examples of such programs are payroll, General accounting, sales statistics and inventory control etc.

(iii) General-Purpose Software

This software provides the framework for a great number of business, scientific, and personal applications. Spreadsheet, data bases, Computer-Aided Design (CAD) and word processing software etc. fall into this category. Most general-purpose software is sold as a package. The software is accompanied by user-oriented documentation such as reference manuals, keyboard templates, and so on.

For more details of the above points, students are advised to refer to the study material Chapter-6.1.,6.7,6.8 and web link <http://en.wikipedia.org/wiki/software>

- (b) Magnetic discs are the most popular direct access medium. By direct access we mean that a record can be accessed without having to plod through the preceding records. The other direct access medium is floppy disc.

A hard disk is a stack of one or more metal platters that spin on one spindle like a stack of rigid diskettes. Each platter is coated with iron oxides, and the entire unit is encased in a sealed chamber. Unlike diskettes, where the disk and drive are separate, the hard disk and drive is a single unit. It includes the hard disk, the motor that spins the platters, and a set of read/write heads.

Advantages of Direct Storage Devices

1. Magnetic rigid disk is a direct access storage medium; therefore, individual records can be retrieved without searching through the entire file.
2. The costs of disks are steadily declining.
3. For real-time systems where direct access is required, disks are currently the only practical means of file storage. Other new types of storage, such as bubble storage, are not widely used yet.
4. Records can be readily updated by writing the new information over the area where the old information was stored.
5. With removable disk packs, a single disk drive can store large quantities of data although all but one of the disks is offline at any given point in time. However, being offline is not a disadvantage for many applications, especially batch applications.
6. Interrelated files stored on magnetic disk can allow a single transaction to be processed against all of these files simultaneously.

Disadvantages of Direct Storage Devices

Updating a master file stored on disk destroys the old information. Therefore, disk does not provide an automatic audit trail. When disk is used, back-up and audit trail require that each old master file records be copied to another medium prior to update.

- (c) An Operating System (OS) is a set of computer programs that manage the hardware and software resources of a computer. an operating system processes raw system and user input and responds by allocating and managing tasks and internal system resources as a service to users and programs of the system. at the foundation of all system software, an

operating system performs basic tasks such as controlling and allocating memory, prioritizing system requests, controlling input and output devices, facilitating networking and managing file systems. most operating systems come with an application that provides an interface to the os managed resources. these applications have had command line interpreters as a basic user interface, but more recently have been implemented as a graphical user interface (GUI) for ease of operation.

There are six basic functions that an operating system can perform

- (i) Schedule Jobs: They can determine the sequence in which jobs are executed, using priorities established by the organisation.
- (ii) Manage Hardware and Software Resources: They can first cause the user's application program to be executed by loading it into primary storage and then cause the various hardware units to perform as specified by the application.
- (iii) Maintain System Security: They may require users to enter a password - a group of characters that identifies users as being authorised to have access to the system.
- (iv) Enable Multiple User Resource Sharing: They can handle the scheduling and execution of the application programs for many users at the same time, a feature called multiprogramming.
- (v) Handle Interrupts : An interrupt is a technique used by the operating system to temporarily suspend the processing of one program in order to allow another program to be executed. Interrupts are issued when a program requests an operation that does not require the CPU, such as input or output, or when the program exceeds some predetermined time limit.
- (vi) Maintain Usage Records : They can keep track of the amount of time used by each user for each system unit - the CPU, secondary storage, and input and output devices. Such information is usually maintained for the purpose of charging users' departments for their use of the organisation's computing resources.

For more details of the above points, students are advised to refer to the study material Chapter-6.3.and web link http://en.wikipedia.org/wiki/operating_system

7. (a) A DBMS is the tool that computers use to achieve the processing and orderly storage of data. A data base is a repository for related collection of data. A company data base might contain information about customers, vendors, employees, sales and inventory. Each piece of information can be added to a data base and extracted later in a meaningful way. DBMS is the program (or collection of programs) that allows users (and other programs) to access and work with a database.

The following is a precise definition of data base as given by "G.M.Scott".

A data base is a computer file system that uses a particular file organisation to facilitate rapid updating of individual records, simultaneous updating of related records, easy access to all records, by all applications programs, and rapid access to all stored data which must be brought together for a particular routine report or inquiry or a special purpose report or inquiry.

A DBMS, may typically perform the following task:

1. The program requires some data from the data base and contains a commands that will cause the needed data elements to be retrieved. The control unit of the CPU causes each instruction of the application program to be executed in sequence. When the data manipulation language command is reached, the control passes from the application program to the DBMS.
2. The DBMS verifies that the data requested has been previously defined in the user's subschema, and that access should be permitted. The DBMS uses its access path mechanisms to identify where the needed elements are located in the data base.

3. The DBMS requests the operating system to execute an input operation.
4. The operating system causes the data to be accessed, read, and transmitted to a buffer storage area in primary storage. This is a special buffer storage used by the DBMS. Control passes from the operating system back to the DBMS.
5. The DBMS transfers the data from the buffer storage to the input area used by the application program.
6. The DBMS provides status information to the application program, such as "record found" or "record not found".
7. The application program processes the data.

(b) Advantages of DBMS

1. Data Sharing
2. Reduced Data Redundancy
3. Improved Data Integrity
4. Data independence
5. Increased Application Programmer and User productivity
6. Improved Data Administration and Control
7. Increased Emphasis on Data as a Resource

Disadvantages of DBMS

1. Concurrency Problems
2. Ownership Problems
3. Problems of Resource
4. Problems of Security

For more details of the above points, students are advised to refer to the study material Chapter-8.1.1.

8. (a) Decision support systems are information processing systems frequently used by accountants, managers, and auditors to assist them in the decision-making process. Advances in hardware technology, interactive computing design, graphics capabilities, and programming languages contributed to this evolution. Decision support systems have achieved broad use in accounting and auditing today.

Decision support systems are a class of computer-based information systems including knowledge based systems that support decision making activities.

Components of Decision Support Systems

A decision support system has four basic components are

- (i) The users: The user of a decision support system is usually a manager with an unstructured or semi-structured problem to solve. The manager may be at any level of authority in the organisation (e.g., either top management or operating management).
- (ii) Databases: Decision support systems include one or more databases. These databases contain both routine and non-routine data from both internal and external sources. The data from external sources include data about the operating environment surrounding an organisation – for example, data about economic conditions, market demand for the organisation's goods or services, and industry competition.
- (iii) Planning languages: Two types of planning languages that are commonly used in decision support systems are: (1) general –purpose planning languages and (2) special-purpose planning languages. General-purpose planning languages allow users to perform many routine tasks – for example, retrieving various data from a database or

performing statistical analyses. These languages enable user to tackle a broad range of budgeting, forecasting, and other worksheet-oriented problems. Special-purpose planning languages are more limited in what they can do, but they usually do certain jobs better than the general-purpose planning languages. Some statistical languages, such as SAS, SPSS, and Minitab, are examples of special purpose planning languages.

- (iv) Model base: The model base is the “brain” of the decision support system because it performs data manipulations and computations with the data provided to it by the user and the database. There are many types of model bases, but most of them are custom-developed models that do some types of mathematical functions-for example, cross tabulation, regression analysis, time series analysis, linear programming and financial computations.
- (b) Direct Attached Storage (DAS) is a storage device that connects directly to a single server. Network workstations access the server to connect to this storage. Because servers may be handling distributed applications such as e-mail or databases, the performance of DAS is typically not as high as that of networked storage. DAS uses the security features of the server’s Network operating system.

With the advent of Storage Area Networking, the term DAS is used to describe a storage solution in which the storage is directly attached to a server. In case of DAS, storage is local to a specific server and the DAS solution can be implemented in various ways. The server vendors implemented variations that were/are not compatible.

Benefits

- Manage storage using the Network Operating System of the attached server
- Scalable to 16 devices for each SCSI host adapter in the server
- Limited dependency on Network Bandwidth.
- Separation of Storage and Server Purchases.
- Operating system independent.

Considerations

- DAS is best implemented on a dedicated file server.
 - No remote connectivity of storage.
 - No centralization or consolidation of Storage Management.
 - Network bottlenecks.
 - No common storage for various platforms.
 - No independence from host computer.
- (c) A computer network is a collection of computers and terminal devices connected together by a communication system. The set of computers may include large-scale computers, medium scale computers, mini computers and microprocessors. The set of terminal devices may include intelligent terminals, “dumb” terminals, workstations of various kinds and miscellaneous devices such as the commonly used telephone instruments.

All of the interconnected data communication devices can form a wide area network, a local area network, or a metropolitan area network.

- (i) Wide Area Networks (WAN) - A WAN covers a large geographic area with various communication facilities such as long distance telephone service, satellite transmission, and under-sea cables. The WAN typically involves best computers and many different types of communication hardware and software. Examples of WANs are interstate banking networks and airline reservation systems. Wide area networks typically operate at lower link speeds (about 1 Mbps).

- (ii) Local Area Networks (LAN) -By contrast, a LAN covers a limited area. A typical LAN connects as many as hundred or so microcomputers that are located in a relatively small area, such as a building or several adjacent buildings.
- (iii) Metropolitan Area Networks (MAN) - A metropolitan area network (MAN) is some where between a LAN and a WAN. The terms MAN is sometimes used to refer to networks which connect systems or local area networks within a metropolitan area (roughly 40 kms in length from one point to another). MANs are based on fiber optic transmission technology and provide high speed (10 Mbps or so), interconnection between sites.

A MAN can support both data and voice, cable television networks are examples of MANs that distribute television signals. A MAN just has one or two cables and does not contain switching elements.

For more details of the above points, students are advised to refer to the study material Chapter-10.2.1

9. (a) Electronic commerce is the process of doing business electronically. It involves the automation of a variety of business-to-business and business-to-consumer transactions through reliable and secure connections.

eCommerce or ecommerce) consists primarily of the distributing, buying, selling, marketing and servicing of products or services over electronic systems such as the Internet and other computer networks.

Electronic Commerce is the application of various communications technologies to provide the automated exchange of business information with internal and external customers, suppliers and financial institutions. Examples of these technologies include Electronic Data Interchange (EDI), bar coding, scanning, E-mail and fax, to name a few. The bottom line is that Electronic Commerce requires a paradigm shift in the way corporations do business today. (Electronic Commerce Forum)

Benefits of Electronic Commerce: EC presents many benefits to individual organizations, consumers, and society as a whole.

For more details of the above points, students are advised to refer to the study material Chapter-11.3 and web link <http://en.wikipedia.org/wiki/ecommerce>

- (b) The term electronic data interchange has many definitions. American National Standards Institute (ANSI) has defined it as:

Electronic Data Interchange (EDI) is the transmission, in a standard syntax, of unambiguous information of business or strategic significance between computers of independent organisations. The users of EDI do not have to change their internal data bases. However, users must translate this information to or from their own computer system formats, but this translation software has to be prepared only once.

In simple terms, EDI is computer-to-computer communication using a standard data format to exchange business information electronically between independent organisations. EDI no longer merely aids in transmitting documents, but dynamically moves data between companies' computer systems. The computer-to-computer transfer can be direct, between two companies using an agreed upon data protocol, or it can be performed by a third-party service vendor. Users can transmit business documents such as purchase orders, price quotes, shipping notices, and even payment orders electronically to customers and suppliers. Design documents, electronic funds transfers, and database transactions can all come under the EDI umbrella. The format for data transmission between trading partners via common carrier, is governed by a predetermined and institutionally agreed upon set standards.

Advantages of EDI

- (i) Issue and receive orders faster

- (ii) Make sales more easily
- (iii) Get paid sooner
- (iv) Minimise capital tied up in inventory
- (v) Reduce letters and memos
- (vi) Decrease enquiries
- (vii) Make bulk updates of catalogues and parts listings -

10. (a) The primary goal of physical database design is data processing efficiency. Designing physical files and databases requires certain information that should have been collected and produced during prior system development phases.

Physical database design requires several critical decisions that will affect the integrity and performance of the database management system. The various issues that influences the physical design are:

1. Choosing the storage format (called data type) for each attribute from the logical data model. The format is chosen to minimize storage space and to maximize data integrity.
2. Grouping attributes from the logical data model into physical records. You will discover that although the columns of a relational table are a natural definition for the contents of a physical record, this is not always the most desirable grouping of attributes.
3. Arranging similarly structured records in secondary memory (primarily hard disks) so that individual and groups of records (called file organizations) can be stored, retrieved, and updated rapidly. Consideration must be given also to protecting data and recovering data after errors are found.
4. Selecting structures (called indexes and database architectures) for storing and connecting files to make retrieving related data more efficient.
5. Preparing strategies for handling queries against the database that will optimize performance and take advantage of the file organizations and indexes that you have specified. Efficient database structures will be of benefit only if queries and the database management systems that handle those queries are tuned to intelligently use those structures.

- (b) Effective database support results in a reliable database where performance is not subject to interruption from hardware, software, or user problems and where optimal performance is achieved. Tuning is an ongoing part of managing any database, as the hardware and software configurations change, and as user activity changes.

Five areas of DBMS management that should be addressed when trying to maintain a well-tuned database are:

- (i) Installation of the DBMS
- (ii) Memory usage
- (iii) Input/output contention
- (iv) CPU usage
- (v) Application tuning

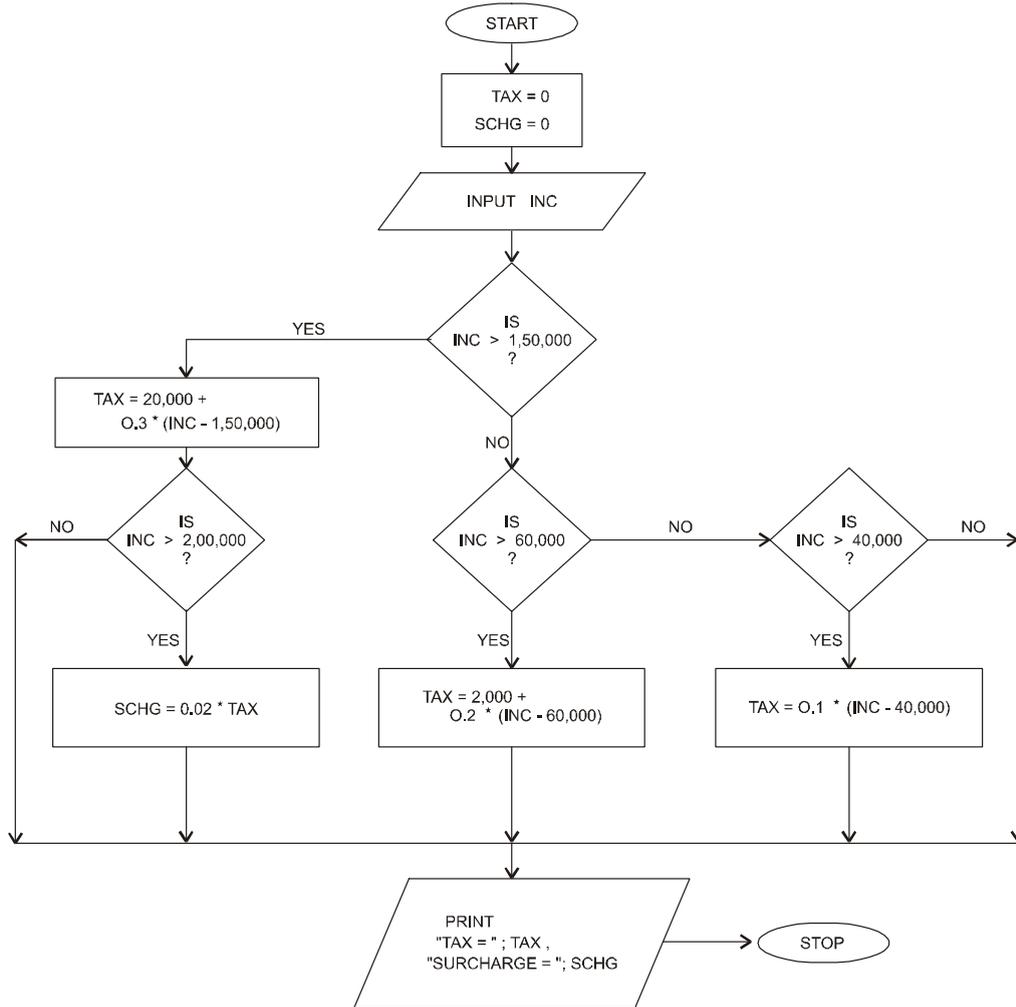
Tuning a database application requires familiarity with the system environment, the DBMS, the application, and the data used by the application. It is here that the skills of even an experienced database administrator are tested.

For more details of the above points, students are advised to refer to the study material Chapter-12.7.

11. Decision Table

| Conditions | Rules | | | |
|---|--------------|----|----|----|
| | 1. | 2. | 3. | 4. |
| Sales region code ³ 10. | Y | Y | N | N |
| Invoice amount ³ Rs. ³ 10,000 | Y | N | Y | N |
| Action Stub | Action entry | | | |
| Delivery charges | | | | |
| Add Rs. 100 to invoice total | | | X | |
| Add Rs. 150 to invoice total | X | | | |
| Add Rs. 200 to invoice total | | | | X |
| Add Rs. 250 to invoice total | | X | | |

12.



13. It is a tool for producing repetitive documents. It gives the flexibility while sending letter and then personalising each copy of it with information such as names, addresses, dates. etc.

Mail Merge is built around two sets of components – main document and the data source. The main document is a form letter. It contains merge fields (or field names) where data would be merged.

There are two documents for establishing Mail Merge i.e. the main document and the data source. The process of mail merge always starts with the main document.

STEP 1 – Setting up the Main Document

STEP 2 – Setting up the Data Source

STEP 3 – Editing the Data Source

STEP 4 – Addition of fields to the Main Document and Printing of the Merge Document.

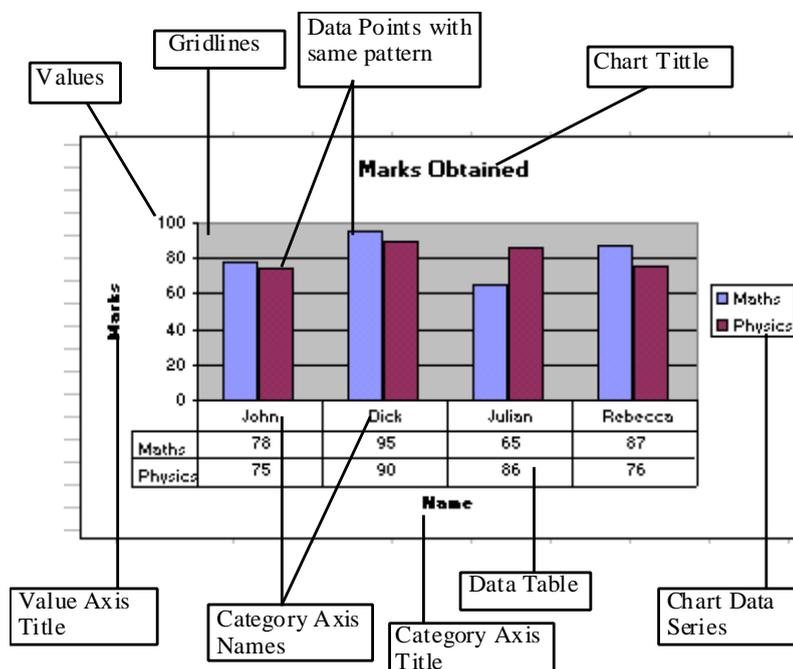
For more details of the above points, students are advised to refer to the study material Chapter-16.6.

14. Charts are effective in graphically representing numerical data. Charts create a 'picture' in the mind's eye by giving a visual comparison, pattern and analysis of numbers. Charts therefore make data interesting and attractive to read and interpret.

A chart is created using data points and data series. Data points are the individual numbers in a worksheet cell within a data table. Data points also known as data markers, are represented by symbols such as a bar, line, area, dot, column etc.

Various Features of Charts:

1. Category Names
2. Category axis
3. Series names
4. Data Labels
5. Legend
6. Tittles



15. Macro is a small program that carries out pre-defined and pre-recorded series of steps by giving a few keyboard shortcuts. Macro is just a way of doing your work in a series of steps which it carries out automatically once it is triggered. It can be very easily said that a macro is like a batch file created in DOS. It contains a series of commands. So, as and when a macro is called and run, the instructions given in it are executed one by one.

A macro automates your tasks, thus saving a lot of your precious time.

Steps to create a macro

1. Select 'Tools/Macro' option from the main menu.
2. Select 'Record New Macro' option from the cascading menu. It would display 'Record Macro' dialog box.
3. Name the macro under which you want to save it. Name to a macro can be given in 'Macro Name' box. A long name upto 255 characters can be given to a macro.
4. After assigning a name, you are required to give a keyboard shortcut to it. If, any lower-case alphabet is given in the 'shortcut key' box, then the macro can be executed by pressing the <Ctrl + 'alphabet'> keys together. However, if an uppercase alphabet is used, then you need to press <Shift + Ctrl + 'alphabet'> keys together.
5. Now, we proceed on to the 'Store Macro in' box. If you want to use the macro that you are now trying to create in the current workbook only, then select the option 'This Workbook' from the drop-down list. However, if you want to make your macro available to other workbook, then select 'New Workbook' option from the drop down list.
6. In the 'Description' box, give some relevant and important details about your macro like the date on which macro was recorded, the owner of the macro, the purpose for which the macro has been created, etc.
7. Now, as and when all the relevant details are filled in the 'Record Macro' dialog box, click at the <OK> button. A very small 'Stop Recording' toolbar will appear on the screen.

Use the Macro

1. If a shortcut key has been assigned to your macro, then it can be activated by pressing <Ctrl+ 'key'> or <Shift+Ctrl+'key'> depending upon the case of the 'key'.
2. A macro can also be run by selecting 'Tool/Macros/Macros' from the main menu. Then, click at the macro name that you want to execute. Once the macro starts running, you can stop it abruptly in between by pressing the 'Esc' key.

For more details of the above points, students are advised to refer to the study material Chapter-17.11.

16. (a) Computer Assisted Audit Techniques (CAATs) is a significant tool for auditors to gather evidences independently. CAATs provide a mean to gain access and to analyse data for a predetermined audit objective, and to report the audit findings with evidences. It helps the auditor to obtain evidence directly on the quality of the records produced and maintained in the system. The quality of the evidences collected gives reassurance on the quality of the system processing such transactional evidences.

Audit approach

The Black Box Approach: Under this approach internal controls are reviewed and test of transactions and account balance verification procedures are performed in the same manner as in non-EDP systems. There is no attempt to test the client's EDP Controls or to use the computer to perform audit procedures. To audit around the computer, the auditor must have access to sufficient source documents and a detailed listing of output in a readable form. In this approach the auditor does not verify the processing part of the computer applications but verifies the systems and controls that exist:

- a. to ensure correct and complete data being made available for processing;

- b. to provide for error detection and correction;
- c. to restart compilation interrupted by power, mechanical or processing failures without duplicating the entries and records;
- d. to ensure checks and controls on output for accuracy and completeness
- e. to provide adequate data security against fire and other calamities, wrong processing, frauds;
- f. to prevent unauthorised amendments, corrections and processing instructions (programs) operating instructions as sequences; and
- g. to keep custody of the data files

White Box Approach : The auditor can verify the programs himself and technically satisfy himself that systems, checks, controls, error detection and data security procedures are satisfactory. The auditor can use test-checks to test the system in operation and ask for special print outs by making use of programming facilities available within the installation. By acquiring the necessary skills, the auditor can use the computer itself as an audit tool to improve the quality of his own audit and reduce time spent on detailed verification of transactions. These include:

- a. Verifying extensions and footings.
 - b. Examining records for quality, completeness, consistency and correctness.
 - c. Comparing data on separate files.
 - d. Summarizing or re-sequencing data and performing analysis.
 - e. Comparing data obtained through audit procedures with company records.
 - f. Selecting audit samples.
 - g. Printing Confirmation requests
- (b) GAPS are standard packages developed by software companies specifically for the purpose of auditors for auditing data stored on computers. These are extensively used by Auditors worldwide for audit through the computer and are quite often the most economical. These are standard packages available off the shelf, which can be used by auditors over a wide platform of hardware, operating systems, operating environments and database.

Features of GAPS

- a. Wide access to various types of databases.
- b. Can extract and analyse data as per set parameters as defined by the auditor.
- c. Can do footings and cross-footing of any specified data field(s).
- d. Can do random selection and classification of data as required.
- e. Can aid in sample selection.
- f. Can pick out exceptional data based on pre-defined criteria.
- g. Can print reports as required.

For more details of the above points, students are advised to refer to the study material Chapter-19.3.

- (c) The major steps to be undertaken by the auditor in the application of a CAATs are to:
- (a) Set the objective of the CAAT application.
 - (b) Determine the content and accessibility of the entity's files.
 - (c) Define the transaction types to be tested.
 - (d) Define the procedures to be performed on the data.
 - (e) Define the output requirements.

- (f) Identify the audit and computer personnel who may participate in the design and application of the CAAT.
 - (g) Refine the estimates of costs and benefits.
 - (h) Ensure that the use of the CAAT is properly controlled and documented.
 - (i) Arrange the administrative activities, including the necessary skills and computer facilities.
 - (j) Execute the CAAT application.
 - (k) Evaluate the results.
17. (a) Stock Item: The Following steps are involved in Stock items are
- Step 1: In Gateway of Tally choose Inventory Info. In Inventory Info menu, select Stock items and Press Enter. Stock Items are further classified into Single Stock Items and Multiple Stock Items.
- Step 2: In Single Stock Items select Create and press the Enter key.
- Step 3: In Stock Item Creation dialogue-box, in the Name field, type Santro and press Enter.
- Step 4: Skip the alias and Description field.
- Step 5: When you select the field-Under, a List of Groups appears on the right side of the screen. Select Primary in the List of Groups.
- Step 6: Similarly for the field Category, select Not Applicable.
- Step 7: In the field Units, select Car and press Enter.
- Step 8 : In Set Standard Rates? field type Yes and press the Enter key. You will now see a screen for Stock Item. Here you are required to enter the Standard Cost (i.e. the Purchase price) and the Standard selling price for that stock item.
- Step 9: In Standard Cost Column, press Enter once to accept the date in the Applicable From field. In the Rate field, type the Purchase Price and press Enter.
- Step 10: In Standard Selling Price column, press Enter to accept the date in the Applicable From field. In the Rate field, type the Sales Price (per unit) and press the Enter.
- Step 11: Press Enter to accept the Standard Rates entered for the stock item and come back to the Stock Item Creation dialogue box. Skip the Opening Balance field and press the Enter key to accept the item details.
- Press ESC key to return to Gateway of Tally.
- (b) Purchase entry: The Following steps are involved in Purchase entry are
- Step 1: In Voucher Creation press the F9 function key on the keyboard to begin Purchase entries.
- Step 2: Press the F2 function key on the keyboard to enter the purchase entry date.
- Step 3: Skip the reference field by pressing the Enter key.
- Step 4: In the Particulars column to give the Cr effect: Type the alphabet 'H' and select from the List of Ledger Accounts displayed on the right hand side of the screen and press Enter.
- Step 5: In the Credit column, type the Total Price and press Enter.
- Step 6: In the next line, to give the Dr effect: Type the alphabet 'P' and select Pur item from the List of Ledger Accounts displayed on the right hand side of the screen and press Enter. Tally now enters the Inventory Allocation screen.

Step 7: In Inventory Allocation for Pur item dialogue box, for Name of the Item type the alphabet 'S' and select item from List of Items then enter Quantity . The Rate and the Amount are automatically calculated. Press the Enter key to accept the dialogue box and return to the Purchase Voucher.

Step 8: The Narration can be entered if desired in the Narration field. Press Enter to Accept the purchase entry.

- (c) OLE Automation Support: Automation allows the user to program on E.X.NGN. The automation objects can be called using VBA scripts for getting data from E.X. NGN or set data into E.X.NGN. Various functions of E.X. are provided as automation objects. The properties and methods of these objects can be set from outside E.X. Some of the important E.X. automation objects are create accounts, maintain accounts and balances, maintain items and narration and enter vouchers through OLE controllers. OLE automation offers the unique opportunity of integrating another application say payroll software, personal management, portfolio management etc. along with E.X. NGN. E.X. New Generation is a user friendly business accounting software aimed at easy understanding of non accounting personnel and professionals. It is simple, flexible and user friendly.

Code-less Accounting: E.X.NGN will provide all the accounting support without demanding you to remember the codes for accounts, debtors and creditors. It will provide a simple-to-use but elegant feature called accounts selection window which pops up whenever you are in account field. One can select the account name from the window. The content of this window is context sensitive. For example, if a cash account is relevant in that context only, account name of cash account type will be displayed. The contents of the window are also dynamic.

- (d) Smart Finder: E.X.NGN will provide a facility to get an instant information on various Items, Documents and Customers / Suppliers.
- (i) Company Consolidation
 - (ii) General Inquiries
 - (iii) Reports:
 - (iv) Data Export / Import:
 - (v) Backup/ Restore
 - (vi) Bank Reconciliation:
 - (vii) Analysis Parameters:

For more details of the above points, students are advised to refer to the study material Chapter-20.5.3.

18. (a) Numbers and Bullets: Word allows the use of numbers and bullets in format menu. It is even possible to convert number to bullets and bullets to numbers in your document. There are several options for the bullets and the numbers. You can choose the appropriate format. Instead of Numbers, it is also possible to choose alphabets for the list. With Word it is easy to introduce multilevel bullets and numbering as well as using Outline numbers. An example of multilevel bulleting is shown below-

- (1) Heading 1
 - (a) Second level
 - (i) Third level
 - (1) Fourth level
- (2) Heading 2
 - (a) Second level
 - (i) Third level

(3) Heading 3

For more details of the above points, students are advised to refer to the study material Chapter-16.2.6.

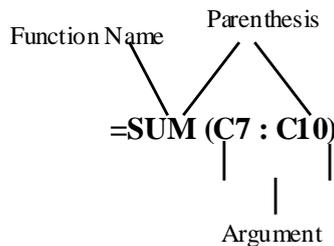
- (b) **Thesaurus:** The Thesaurus is a useful writing tool especially if it comes along with your word processor. Thesaurus to find a more precise word. Thesaurus is a book in which words and phrases of similar meaning are grouped together while a Language Dictionary is a book that explains the meaning of word.

The Thesaurus offers you the option of four meanings to the word – examination, hunt, explore and examine. If the meaning you want is examination you can then select ‘examination’ and see the choice of the synonyms. The choice here is ‘examination’ and ‘inspection’. If you desire a better word than these two then you can look up either of the words further to see their possible meanings.

For more details of the above points, students are advised to refer to the study material Chapter-16.3.4.

19. (a) **Excel functions:** Excel has hundreds of predefined formulae’s known as Functions. Functions use specific arguments in a particular order or structure.

The arguments of functions can be anything from numbers, text, True or False values, or cell references. We can also have a formula or other functions as arguments in a function that are called nested functions. The normal order for a function is the Function Name, the opening parenthesis, arguments for the function separated by commas and closing parenthesis.



The functions available in Excel can be categorised under several distinct heads.

| Category | Purpose |
|--------------------|--|
| Financial | To calculate interest, depreciation, loan payment, IRR, NPV etc. |
| Date & Time | To return the year, date, day, hour or time |
| Math & Trig | To calculate the absolute values such as pi, logarithms, degrees and angles etc. |
| Statistical | For common functions such as totals, averages, mean, median and mode etc. & advanced functions. |
| Lookup & Reference | to search for and return values from a range, also to create hyperlinks etc. Database to calculate the values in an Excel Database based on the conditions you specify |
| Text | To convert text to upper and lower case, concatenate text etc. |
| Logical | To evaluate an expression or argument and returns True and False |
| Information | To get information on a cell, an error or the current status of an object |

For more details of the above points, students are advised to refer to the study material Chapter-17.6.

- (b) **Print Setting:** To print from a worksheet would therefore need more attention to pagination and margin adjustments. Excel therefore comes with more tools for previewing and printing a worksheet.

Previewing the Layout : Print Preview allows you to adjust the columns and margins easily.

The Preview window offers several buttons with which we can have different views of the pages to print and also go to the Print and Page Set up dialog boxes to make adjustments in printing. we can also view all the pages of the worksheet in preview using the Previous page and the Next page buttons. Margins can also be adjusted from the Preview window.



We can take a magnified view of your page using the Zoom button. The Page Break Preview shows the data that will go on each page and allows you to click and adjust the page breaks. It can be accessed from Print Preview or from the View menu. The white areas show what will be printed while the areas that will not be printed are in grey. We can adjust the page breaks by dragging the page break. You can also insert page breaks manually.

The Page Break Preview button changes to the Normal view button if you are already in Page Break Previews when we switched to Print Preview.

Changing page and Sheet Setting: click the Set up button to go to the Page set up view. we can also directly access the page Set up dialog box using the File menu. The Page Set up dialog box has four tabbed pages for setting up the page and sheet layout.

Setting Print Area

Excel has an option called Print Area in the File menu. After you select the print range, you can click on Set Print Area accessed from Print Area. The range is set. To remove the selected print area, choose Clear Print Area.

Print Settings

The Print dialog box gives you the complete control over what you will print. We use the Print button on the Standards toolbar, Excel will start printing a copy of all the pages or the selected range. However, if you want to change the print options, you can access the Print dialog box from the file menu.

For more details of the above points, students are advised to refer to the study material Chapter-17.5

20. (a) **Handouts & Notes:** Handouts are prints of slides or the outline of your presentation you give to participants. We can have 2, 3, 4, 6 or 9 slides on a handout.

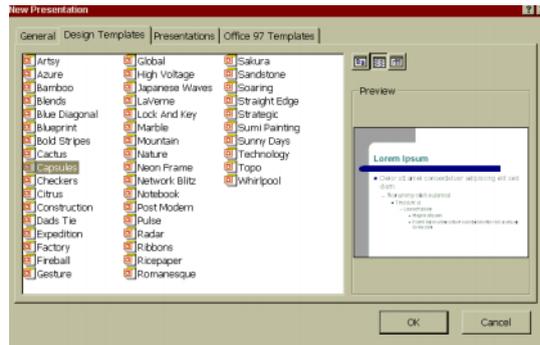
Notes are points that make regarding a slide either to help you remember during a presentation or to help the audience with details of background information regarding a slide. You print Notes along with a small version of a slide.

We can choose to have two, three, four, six or nine slides per handout by clicking the desired option in the handout master dialog box. We can also insert the title of your presentation in the header area, the date and provide footer information as well. It is also possible to edit the text in any of the slides by zooming the size of the Handout master. Handouts are slides printed without any notes. .

On both the Handouts and Notes master, we can create drawing objects, pictures, and headers and footers. Items such as drawing objects, pictures, headers, and footers will not appear in the notes pane when your presentation is saved as a Web page.

For more details of the above points, students are advised to refer to the study material Chapter-18.7

- (b) Design template: We can use Design templates to give you the background design for your presentation. There are several design templates stored in PowerPoint that you can preview and select. Design templates contain color schemes, slide and title masters with custom formatting to give a particular look to a presentation. Apply a design template to presentation, the new template replaces the slide master, title master, and colour scheme of the original presentation. We can change the design of a presentation at any time by choosing to apply a new design template from the Format menu.



These slides offer a combination of text, pictures, charts, tables, organization charts and other objects. The New Slide dialog box offers several options for multi-object slides. You can, however, change the layout of any slide you want, any time.



THE INSTITUTE OF CHARTERED ACCOUNTANTS OF INDIA
PROFESSIONAL COMPETENCE COURSE(PCC)

SYLLABUS

GROUP I

- Paper – 1 : Advanced Accounting
Paper – 2 : Auditing and Assurance
Paper – 3 : Law, Ethics and Communication

GROUP II

- Paper – 4 : Cost Accounting and Financial Management
Paper –5 : Taxation
Paper – 6 : Information Technology and Strategic Management

GROUP – I

PAPER – 1 : ADVANCED ACCOUNTING

(One paper – Three hours – 100 Marks)

Level of Knowledge: Working knowledge

Objectives:

- (a) To lay a theoretical foundation for the preparation and presentation of financial statements,
- (b) To gain working knowledge of the professional standards, principles and procedures of accounting and their application to different practical situations,
- (c) To gain the ability to solve simple problems and cases relating to company accounts including special type of corporate entities, partnership accounts and
- (c) To familiarize students with the fundamentals of computerized system of accounting.

Contents

1. Conceptual Framework for Preparation and Presentation of Financial Statements
2. Accounting Standards

An overview; standards setting process

Working knowledge of:

- AS 1: Disclosure of Accounting Policies
- AS 2: Valuation of Inventories
- AS 3: Cash Flow Statements
- AS 4: Contingencies and Events occurring after the Balance Sheet Date
- AS 5: Net Profit or Loss for the Period, Prior Period Items and Changes in Accounting Policies
- AS 6: Depreciation Accounting
- AS 7: Construction Contracts (Revised 2002)
- AS 9: Revenue Recognition
- AS 10: Accounting for Fixed Assets
- AS 11: The Effects of Changes in Foreign Exchange Rates (Revised 2003)
- AS 12: Accounting for Government Grants
- AS 13: Accounting for Investments
- AS 14: Accounting for Amalgamations
- AS 16: Borrowing Costs
- AS 19 Leases
- AS 20 Earnings Per Share
- AS 26: Intangible Assets
- AS 29: Provisions, Contingent Liabilities and Contingent Assets.

3. Company Accounts

- (a) Preparation of financial statements – Profit and Loss Account, Balance Sheet and Cash Flow Statement
- (b) Profit (Loss) prior to incorporation

- (c) Alteration of share capital, Conversion of fully paid shares into stock and stock into shares, Accounting for bonus issue, Accounting for employee stock option plan, Buy back of securities, Equity shares with differential rights, Underwriting of shares and debentures, Redemption of debentures
 - (d) Accounting for business acquisition, Amalgamation and reconstruction (excluding problems of amalgamation on inter-company holding)
 - (e) Accounting involved in liquidation of companies, Statement of Affairs (including deficiency/surplus accounts) and liquidator's statement of account of the winding up.
4. Financial Statements of Banking, Insurance and Electricity Companies
 5. Average Due Date, Account Current, Self-Balancing Ledgers
 6. Financial Statements of Not-for-Profit Organisations
 7. Accounts from Incomplete Records
 8. Accounting for Special Transactions
 - (a) Hire purchase and instalment sale transactions
 - (b) Investment accounts
 - (c) Departmental and branch accounts including foreign branches
 - (d) Insurance claims for loss of stock and loss of profit.
 9. Advanced Issues in Partnership Accounts

Final accounts of partnership firms – Admission, retirement and death of a partner including treatment of goodwill; Dissolution of partnership firms including piecemeal distribution of assets; Amalgamation of partnership firms; Conversion into a company and Sale to a company.
 10. Accounting in Computerised Environment

An overview of computerized accounting system–Salient features and significance, Concept of grouping of accounts, Codification of accounts, Maintaining the hierarchy of ledger, Accounting packages and consideration for their selection, Generating Accounting Reports.

Note – If either old Accounting Standards (ASs), Announcements and Limited Revisions to ASs are withdrawn or new ASs, Announcements and Limited Revisions to ASs are issued by the Institute of Chartered Accountants of India in place of existing ASs, Announcements and Limited Revisions to ASs, the syllabus will accordingly include/exclude such new developments in place of the existing ones with effect from the date to be notified by the Institute.

PAPER- 2 : AUDITING AND ASSURANCE

(One Paper —Three hours — 100 Marks)

Level of knowledge: Working Knowledge

Objective:

To understand objective and concepts of auditing and gain working knowledge of generally accepted auditing procedures and of techniques and skills needed to apply them in audit and attestation engagements and solving simple case-studies.

Contents

1. Auditing Concepts —Nature and limitations of Auditing, Basic Principles governing an audit, Ethical principles and concept of Auditor's Independence, Relationship of auditing with other disciplines.

2. Auditing and Assurance Standards —Overview, Standard-setting process, Role of International Auditing and Assurance Standards Board and Auditing and Assurance Standards Board in India.
3. Auditing engagement —Audit planning, Audit programme, Control of quality of audit work— Delegation and supervision of audit work.
4. Documentation — Audit working papers, Audit files: Permanent and current audit files, Ownership and custody of working papers.
5. Audit evidence — Audit procedures for obtaining evidence, Sources of evidence, Reliability of audit evidence, Methods of obtaining audit evidence % Physical verification, Documentation, Direct confirmation, Re-computation, Analytical review techniques, Representation by management.
6. Internal Control — Elements of internal control, Review and documentation, Evaluation of internal control system, Internal control questionnaire, Internal control check list, Tests of control, Application of concept of materiality and audit risk, Concept of internal audit.
7. Internal Control and Computerized Environment, Approaches to Auditing in Computerised Environment.
8. Audit Sampling — Types of sampling, Test checking, Techniques of test checks.
9. Analytical review procedures.
10. Audit of payments — General considerations, Wages, Capital expenditure, Other payments and expenses, Petty cash payments, Bank payments, Bank reconciliation.
11. Audit of receipts — General considerations, Cash sales, Receipts from debtors, Other Receipts.
12. Audit of Purchases — Vouching cash and credit purchases, Forward purchases, Purchase returns, Allowance received from suppliers.
13. Audit of Sales — Vouching of cash and credit sales, Goods on consignment, Sale on approval basis, Sale under hire% purchase agreement, Returnable containers, Various types of allowances given to customers, Sale returns.
14. Audit of suppliers' ledger and the debtors' ledger — Self-balancing and the sectional balancing system, Total or control accounts, Confirmatory statements from credit customers and suppliers, Provision for bad and doubtful debts, Writing off of bad debts.
15. Audit of impersonal ledger — Capital expenditure, deferred revenue expenditure and revenue expenditure, Outstanding expenses and income, Repairs and renewals, Distinction between reserves and provisions, Implications of change in the basis of accounting.
16. Audit of assets and liabilities.
17. Company Audit — Audit of Shares, Qualifications and Disqualifications of Auditors, Appointment of auditors, Removal of auditors, Powers and duties of auditors, Branch audit , Joint audit , Special audit, Reporting requirements under the Companies Act, 1956.
18. Audit Report — Qualifications, Disclaimers, Adverse opinion, Disclosures, Reports and certificates.
19. Special points in audit of different types of undertakings, i.e., Educational institutions, Hotels, Clubs, Hospitals, Hire-purchase and leasing companies (excluding banks, electricity companies, cooperative societies, and insurance companies).
20. Features and basic principles of government audit, Local bodies and not-for-profit organizations, Comptroller and Auditor General and its constitutional role.

Note: Candidates are expected to have working knowledge of relevant Auditing and Assurance Standards issued by the ICAI with reference to above-mentioned topics.

PAPER – 3 : LAW, ETHICS AND COMMUNICATION

(One paper – Three hours — 100 Marks)

Level of Knowledge: Working knowledge

Part I : Law (60 Marks)

Objective:

To test working knowledge of business laws and company law and their practical application in commercial situations.

Contents

Business Laws (30 Marks)

1. The Indian Contract Act, 1872
2. The Negotiable Instruments Act, 1881
3. The Payment of Bonus Act, 1965
4. The Employees' Provident Fund and Miscellaneous Provisions Act, 1952
5. The Payment of Gratuity Act, 1972.

Company Law (30 Marks)

The Companies Act, 1956 – Sections 1 to 197

- (a) Preliminary
- (b) Board of Company Law Administration — National Company Law Tribunal; Appellate Tribunal
- (c) Incorporation of Company and Matters Incidental thereto
- (d) Prospectus and Allotment, and other matters relating to use of Shares or Debentures
- (e) Share Capital and Debentures
- (f) Registration of Charges
- (g) Management and Administration – General Provisions – Registered office and name, Restrictions on commencement of business, Registers of members and debentures holders, Foreign registers of members or debenture holders, Annual returns, General provisions regarding registers and returns, Meetings and proceedings
- (h) Company Law in a computerized Environment – E-filing.

Note: If new legislations are enacted in place of the existing legislations, the syllabus would include the corresponding provisions of such new legislations with effect from a date notified by the Institute.

Part II : Business Ethics (20 Marks)

Objective:

To have an understanding of ethical issues in business.

Contents

1. Introduction to Business Ethics

The nature, purpose of ethics and morals for organizational interests; Ethics and Conflicts of Interests; Ethical and Social Implications of business policies and decisions; Corporate Social Responsibility; Ethical issues in Corporate Governance.

2. Environment issues
Protecting the Natural Environment – Prevention of Pollution and Depletion of Natural Resources; Conservation of Natural Resources.
3. Ethics in Workplace
Individual in the organisation, discrimination, harassment, gender equality.
4. Ethics in Marketing and Consumer Protection
Healthy competition and protecting consumer's interest.
5. Ethics in Accounting and Finance
Importance, issues and common problems.

Part III : Business Communications (20 Marks)

Objective:

To nurture and develop the communication and behavioural skills relating to business

Contents

1. Elements of Communication
 - (a) Forms of Communication: Formal and Informal, Interdepartmental, Verbal and non-verbal; Active listening and critical thinking
 - (b) Presentation skills including conducting meeting, press conference
 - (c) Planning and Composing Business messages
 - (d) Communication channels
 - (e) Communicating Corporate culture, change, innovative spirits
 - (f) Communication breakdowns
 - (g) Communication ethics
 - (h) Groups dynamics; handling group conflicts, consensus building; influencing and persuasion skills; Negotiating and bargaining
 - (i) Emotional intelligence - Emotional Quotient
 - (j) Soft skills – personality traits; Interpersonal skills ; leadership.
2. Communication in Business Environment
 - (a) Business Meetings – Notice, Agenda, Minutes, Chairperson's speech
 - (b) Press releases
 - (c) Corporate announcements by stock exchanges
 - (d) Reporting of proceedings of a meeting.
3. Basic understanding of legal deeds and documents
 - (a) Partnership deed
 - (b) Power of Attorney
 - (c) Lease deed
 - (d) Affidavit
 - (e) Indemnity bond
 - (f) Gift deed
 - (g) Memorandum and articles of association of a company
 - (h) Annual Report of a company.

GROUP II

PAPER – 4 : COST ACCOUNTING AND FINANCIAL MANAGEMENT

(One paper – Three hours — 100 Marks)

Level of Knowledge: Working knowledge

Part I : Cost Accounting (50 Marks)

Objectives:

- (a) To understand the basic concepts and processes used to determine product costs,
- (b) To be able to interpret cost accounting statements,
- (c) To be able to analyse and evaluate information for cost ascertainment, planning, control and decision making, and
- (d) To be able to solve simple cases.

Contents

- 1. Introduction to Cost Accounting
 - (a) Objectives and scope of Cost Accounting
 - (b) Cost centres and Cost units
 - (c) Cost classification for stock valuation, Profit measurement, Decision making and control
 - (d) Coding systems
 - (e) Elements of Cost
 - (f) Cost behaviour pattern, Separating the components of semi-variable costs
 - (g) Installation of a Costing system
 - (h) Relationship of Cost Accounting, Financial Accounting, Management Accounting and Financial Management.
- 2. Cost Ascertainment
 - (a) Material Cost
 - (i) Procurement procedures— Store procedures and documentation in respect of receipts and issue of stock, Stock verification
 - (ii) Inventory control —Techniques of fixing of minimum, maximum and reorder levels, Economic Order Quantity, ABC classification; Stocktaking and perpetual inventory
 - (iii) Inventory accounting
 - (iv) Consumption — Identification with products of cost centres, Basis for consumption entries in financial accounts, Monitoring consumption.
 - (b) Employee Cost
 - (i) Attendance and payroll procedures, Overview of statutory requirements, Overtime, Idle time and Incentives
 - (ii) Labour turnover
 - (iii) Utilisation of labour, Direct and indirect labour, Charging of labour cost, Identifying labour hours with work orders or batches or capital jobs
 - (iv) Efficiency rating procedures
 - (v) Remuneration systems and incentive schemes.

- (c) Direct Expenses
Sub-contracting — Control on material movements, Identification with the main product or service.
 - (d) Overheads
 - (i) Functional analysis — Factory, Administration, Selling, Distribution, Research and Development
Behavioural analysis — Fixed, Variable, Semi variable and Step cost
 - (ii) Factory Overheads — Primary distribution and secondary distribution, Criteria for choosing suitable basis for allotment, Capacity cost adjustments, Fixed absorption rates for absorbing overheads to products or services
 - (iii) Administration overheads — Method of allocation to cost centres or products
 - (iv) Selling and distribution overheads — Analysis and absorption of the expenses in products/customers, impact of marketing strategies, Cost effectiveness of various methods of sales promotion.
3. Cost Book-keeping
Cost Ledgers—Non-integrated accounts, Integrated accounts, Reconciliation of cost and financial accounts.
4. Costing Systems
- (a) Job Costing
Job cost cards and databases, Collecting direct costs of each job, Attributing overhead costs to jobs, Applications of job costing.
 - (b) Batch Costing
 - (c) Contract Costing
Progress payments, Retention money, Escalation clause, Contract accounts, Accounting for material, Accounting for plant used in a contract, Contract profit and Balance sheet entries.
 - (d) Process Costing
Double entry book keeping, Process loss, Abnormal gains and losses, Equivalent units, Inter-process profit, Joint products and by products.
 - (e) Operating Costing System
5. Introduction to Marginal Costing
Marginal costing compared with absorption costing, Contribution, Breakeven analysis and profit volume graph.
6. Introduction to Standard Costing
Various types of standards, Setting of standards, Basic concepts of material and Labour standards and variance analysis.

Part II : Financial Management (50 Marks)

Objectives:

- (a) To develop ability to analyse and interpret various tools of financial analysis and planning,
- (b) To gain knowledge of management and financing of working capital,
- (c) To understand concepts relating to financing and investment decisions, and
- (d) To be able to solve simple cases.

Contents:

1. Scope and Objectives of Financial Management
 - (a) Meaning, Importance and Objectives
 - (b) Conflicts in profit versus value maximisation principle
 - (c) Role of Chief Financial Officer.
2. Time Value of Money
Compounding and Discounting techniques— Concepts of Annuity and Perpetuity.
3. Financial Analysis and Planning
 - (a) Ratio Analysis for performance evaluation and financial health
 - (b) Application of Ratio Analysis in decision making
 - (c) Analysis of Cash Flow Statement.
4. Financing Decisions
 - (a) Cost of Capital — Weighted average cost of capital and Marginal cost of capital
 - (b) Capital Structure decisions — Capital structure patterns, Designing optimum capital structure, Constraints, Various capital structure theories
 - (c) Business Risk and Financial Risk — Operating and financial leverage, Trading on Equity.
5. Types of Financing
 - (a) Different sources of finance
 - (b) Project financing — Intermediate and long term financing
 - (c) Negotiating term loans with banks and financial institutions and appraisal thereof
 - (d) Introduction to lease financing
 - (e) Venture capital finance.
6. Investment Decisions
 - (a) Purpose, Objective, Process
 - (b) Understanding different types of projects
 - (c) Techniques of Decision making: Non-discounted and Discounted Cash flow Approaches — Payback Period method, Accounting Rate of Return, Net Present Value, Internal Rate of Return, Modified Internal Rate of Return, Discounted Payback Period and Profitability Index
 - (d) Ranking of competing projects, Ranking of projects with unequal lives.
7. Management of Working Capital
 - (a) Working capital policies
 - (b) Funds flow analysis
 - (c) Inventory management
 - (d) Receivables management
 - (e) Payables management
 - (f) Management of cash and marketable securities
 - (g) Financing of working capital.

PAPER – 5 : TAXATION

(One paper — Three hours – 100 Marks)

Level of Knowledge: Working knowledge

Objectives:

- (a) To gain knowledge of the provisions of Income-tax law relating to the topics mentioned in the contents below and
- (b) To gain ability to solve simple problems concerning assessee's with the status of 'Individual' and 'Hindu Undivided Family' covering the areas mentioned in the contents below.

Part I : Income-tax (75 marks)

Contents

1. Important definitions in the Income-tax Act, 1961
2. Basis of charge; Rates of taxes applicable for different types of assessee's
3. Concepts of previous year and assessment year
4. Residential status and scope of total income; Income deemed to be received / deemed to accrue or arise in India
5. Incomes which do not form part of total income
6. Heads of income and the provisions governing computation of income under different heads
7. Income of other persons included in assessee's total income
8. Aggregation of income; Set-off or carry forward and set-off of losses
9. Deductions from gross total income
10. Computation of total income and tax payable; Rebates and reliefs
11. Provisions concerning advance tax and tax deducted at source
12. Provisions for filing of return of income.

Part II : Service tax and VAT (25 marks)

Objective:

To gain knowledge of the provisions of service tax as mentioned below and basic concepts of Value added tax (VAT) in India.

Contents:

1. Service tax – Concepts and general principles
2. Charge of service tax and taxable services
3. Valuation of taxable services
4. Payment of service tax and filing of returns
5. VAT – Concepts and general principles.

Note: If new legislations are enacted in place of the existing legislations the syllabus will accordingly include the corresponding provisions of such new legislations in the place of the existing legislations with effect from the date to be notified by the Institute. Students shall not be examined with reference to any particular State VAT Law.

PAPER – 6 : INFORMATION TECHNOLOGY AND STRATEGIC MANAGEMENT

(One paper – Three hours – 100 Marks)

Level of Knowledge: Working knowledge

Section A : Information Technology (50 Marks)

Objective:

To develop an understanding of Information Technology and its use by the business as facilitator and driver.

Contents

1. Introduction to Computers
 - (a) Computer Hardware
 - Classification of Computers - Personal computer, Workstation, Servers and Super computers
 - Computer Components - CPU, Input output devices, Storage devices
 - (b) BUS, I/O CO Processors, Ports (serial, parallel, USB ports), Expansion slots, Add on cards, On board chips, LAN cards, Multi media cards , Cache memory, Buffers, Controllers and drivers
 - (c) Computer Software
 - Systems Software - Operating system, Translators (Compilers, Interpreters and Assemblers), System utilities
 - General Purpose Software/ Utilities - Word Processor, Spread Sheet, DBMS, Scheduler / Planner, Internet browser and E-mail clients
 - Application Software - Financial Accounting, Payroll, Inventory
 - Specialised Systems – Enterprise Resource Planning (ERP) , Artificial Intelligence , Expert Systems, Decision Support Systems – An Overview
2. Data Storage, Retrievals and Data Base Management Systems
 - (a) Data and Information Concepts: Bits, Bytes, KB, MB, GB, TB
 - (b) Data organization and Access
 - Storage Concepts : Records, Fields, Grouped fields, Special fields like date, Integers, Real, Floating, Fixed, Double precision, Logical, Characters, Strings, Variable character fields (Memo); Key, Primary key, Foreign key, Secondary key, Referential integrity, Index fields.
 - Storage techniques: Sequential, Block Sequential, Random, Indexed, Sequential access, Direct access, Random access including Randomizing
 - Logical Structure and Physical structure of files
 - (c) DBMS Models and Classification:
 - Need for database, Administration, Models, DML and DDL (Query and reporting); Data Dictionaries, Distributed data bases, Object oriented databases, Client Server databases, Knowledge databases
 - (d) Backup and recovery – backup policy, backup schedules, offsite backups, recycling of backups, frequent checking of recovery of backup
 - (e) Usage of system software like program library management systems and tape and disk management systems – features, functionalities, advantages
 - (f) Data Mining and Data Warehousing - An overview
3. Computer Networks & Network Security
 - (a) Networking Concepts – Need and Scope, Benefits

Classification: LAN, MAN, WAN, VPN; Peer-to-Peer, Client Server

Components- NIC, Router, Switch, Hub, Repeater, Bridge, Gateway, Modem

Network Topologies– Bus, Star,, Ring, Mesh, Hybrid, Architecture :Token ring, Ethernet

Transmission Technologies and Protocols – OSI, TCP/IP, ISDN etc.

Network Operating System

(b) Local Area Networks- Components of a LAN, Advantages of LAN

(c) Client Server Technology

Limitation of Single user systems and need for Client Server Technology

Servers - Database, Application, Print servers, Transaction servers, Internet servers, Mail servers, Chat servers, IDS

Introduction to 3- tier and "n" tier architecture (COM, COM+)

(d) Data centres: Features and functions, Primary delivery centre and disaster recovery site

(e) Network Security

Need; Threats and Vulnerabilities; Security levels; techniques

4. Internet and other technologies

(a) Internet and world-wide web, Intranets, Extranets, applications of Internet, Internet protocols

(b) E-Commerce - Nature, Types (B2B, B2C, C2C), Supply chain management, CRM, Electronic data interchange (EDI), Electronic fund transfers (EFT), Payment portal, E-Commerce security;

(c) Mobile Commerce, Bluetooth and Wi-Fi

5. Flowcharts, Decision Tables.

Section B : Strategic Management (50 Marks)

Objectives:

(a) To develop an understanding of the general and competitive business environment,

(b) To develop an understanding of strategic management concepts and techniques,

(c) To be able to solve simple cases.

Contents

1. Business Environment

General Environment % Demographic, Socio-cultural, Macro-economic, Legal/political, Technological, and Global; Competitive Environment.

2. Business Policy and Strategic Management

Meaning and nature; Strategic management imperative; Vision, Mission and Objectives; Strategic levels in organisations.

3. Strategic Analyses

Situational Analysis – SWOT Analysis, TOWS Matrix, Portfolio Analysis % BCG Matrix.

4. Strategic Planning

Meaning, stages, alternatives, strategy formulation.

5. Formulation of Functional Strategy

Marketing strategy, Financial strategy, Production strategy, Logistics strategy, Human resource strategy.

6. Strategy Implementation and Control

Organisational structures; Establishing strategic business units; Establishing profit centers by business, product or service, market segment or customer; Leadership and behavioural challenges.

7. Reaching Strategic Edge

Business Process Reengineering, Benchmarking, Total Quality Management, Six Sigma, Contemporary Strategic Issues.

TRANSITION SCHEME FOR STUDENTS OF PROFESSIONAL EDUCATION (COURSE-II)

- (1) Professional Education (Course-II) students who have passed Professional Education (Examination-I) / Foundation Examination can switch over to Professional Competence Course. Such students are classified into two categories –

Category (a)

- Students who have passed one of the Groups of Professional Education (Examination-II);
- Students who have appeared in Professional Education (Examination-II), but not passed any of the Groups; and
- Students who have registered for Professional Education (Course- II) and eligible to appear in Professional Education (Examination-II), but not yet appeared.

Category (b)

- Students who are registered, provisionally or otherwise, for Professional Education (Course-II), but ineligible to appear in Professional Education (Examination-II).

Transition scheme for the students falling under Category (a) above is as under:

- (i) Register concurrently for Professional Competence Course (PCC), Articled / Audit training and 100 Hours Information Technology Training.

Complete 100 hours Information Technology Training;

Appear in Professional Competence Examination (PCE) in the eligible attempt of Professional Competence Examination without the requirement of completion of minimum 18 months of practical training in accordance with the eligibility norm stated in Para (2); or

- (ii) Continue with Professional Education (Examination-II) till the last Professional Education (Examination - II) to be held in May 2008.

Transition scheme for the students falling under Category (b) above is as under: -

- (i) Register concurrently for Professional Competence Course (PCC), Articled / Audit training and 100 Hours Information Technology Training;

Complete 100 hours Information Technology Training;

Appear in Professional Competence Examination (PCE) in May 2008 or thereafter, after completion of minimum 15 months of articled training or equivalent period of audit training 3 months prior to the first day of the month in which examination is held. The students are permitted to undergo training partly as an articled assistant and partly as an audit assistant.

- (ii) Continue with Professional Education (Course-II)/Examination till the last Professional Education (Examination-II) to be held in May 2008.

Note: 6 months of articleship training is equivalent to 8 months of audit training. Any fractional period of audit training is not counted. So a student who falls under Category (a) and who is undergoing audit training has to complete 24 months of training for appearing in PCE.

Relevant extracts of Implementation Schedule

| | |
|---|--------------------|
| Commencement of New Scheme | September 13, 2006 |
| Registration commences for Articles under New Scheme [Applicable to students who are studying Professional Education (Course-II) after passing Professional Education (Examination-I) / Foundation Examination] | September 13, 2006 |
| Last Professional Education (Examination-II) | May, 2008 |
| First Professional Competence Examination for students joining Professional Competence Course after passing Professional Education (Examination-I) /Foundation Examination | May, 2007 |

- (2) Eligibility norm of Professional Education (Course –II) students who have switched over / will switch over to Professional Competence Course (PCC) to appear in Professional Competence Examination (PCE)
- (i) All such students have already appeared in Professional Education (Examination –II) and passed one of the Groups or could not pass any of the Groups or eligible to appear Professional Education (Examination-II) .
- (ii) Students should successfully complete 250 Hours Compulsory Computer Training programme / 100 Hours Information technology Training programme before appearing in the PCE.

| Sl No. | 1 | 2 |
|--------|--|--|
| | Category of students of PE-II | Eligibility to appear in Professional Competence Examination (PCE) |
| 1. | PE- II students who have passed foundation examination | May 2007 and thereafter |
| 2. | PE- II students who have passed PE-I examination held in May 2005 or in any earlier term | May 2007 and thereafter |
| 3. | PE- II students who have passed PE-I examination held in November 2005 | November 2007 and thereafter |
| 4. | PE-II students who have passed PE-I examination held in May, 2006 | These students fall in category (b) and will appear PCE as per the transition scheme |

See also Figure-1.

- (3) Transition Scheme for Professional Education (Course-II) Students other than those who have passed Professional Education (Examination –I) or Foundation Examination
- Continue with Professional Education (Examination-II) till the last Professional Education (Examination-II) to be held in May 2008; or
 - Switch over to Common Proficiency Test. See Figure-2.

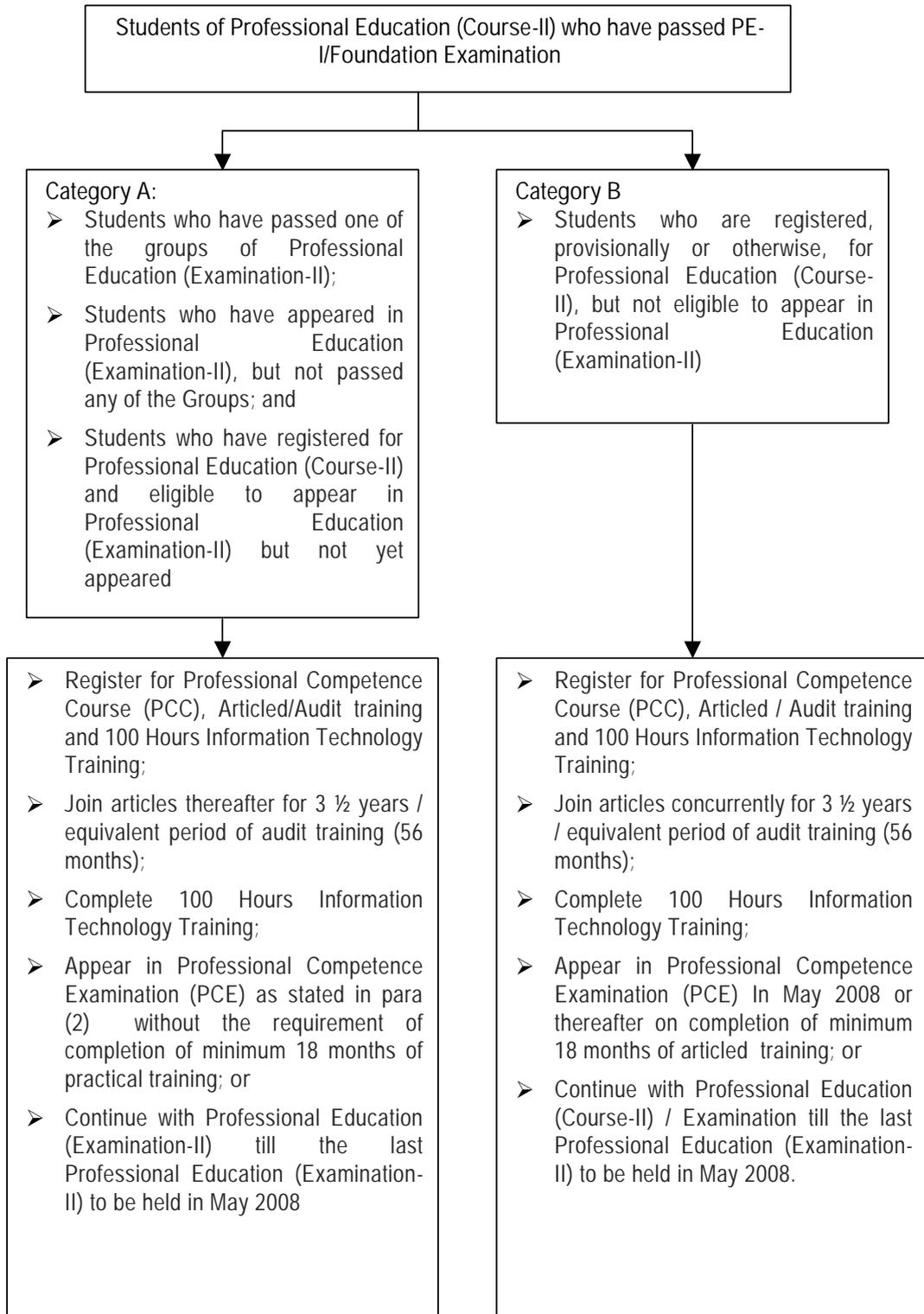


Figure-1

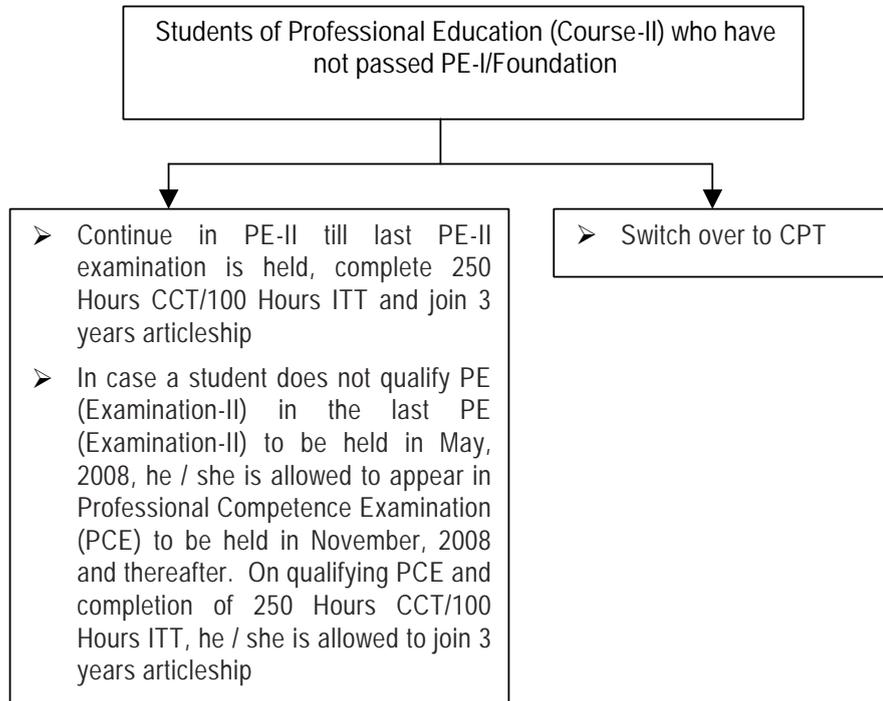


Figure-2

- (4) Subject-wise exemption: A Professional Education (Course-II) student who has been granted an exemption under Regulation 37A(7) in one or more papers shall continue to enjoy the said exemption in the corresponding paper(s) under PCC as given below :

Subject-wise Exemption for PE-II Examination

| Existing | New |
|--|---|
| Professional Education (Course-II) | Professional Competence Course |
| Group I | Group I |
| Paper 1: Accounting | Advanced Accounting (100 Marks) |
| Paper 2: Auditing | Auditing and Assurance (100 Marks) |
| Paper 3: Business and Corporate Laws Section A: Business Law (60 marks) Section B: Corporate Laws (40 marks) | Law, Ethics and Communication Part I: Law (60 Marks) Business Laws (30 Marks) Part II: Business Ethics (20 Marks) Part III: Business Communication (20 Marks) |
| Group II | Group II |
| Paper 4: Cost Accounting and Financial Management Section A: Cost Accounting (60 marks) Section B: Financial Management (40 marks) | Cost Accounting and Financial Management Part I: Cost Accounting (50 Marks) Part II: Financial Management (50 Marks) |
| Paper 5: Income-tax and Central Sales Tax Section A: Income Tax (75 marks) Section B: Central Sales Tax (25 marks) | Taxation Part I: Income-tax (75 Marks) Part II: Service Tax and VAT (25 Marks) |
| Paper 6: Information Technology | Information Technology and Strategic Management Section A: Information Technology (50 Marks) Section B: Strategic Management (50Marks) |

- (5) Group-wise exemption: A student of Professional Education (Course-II) who has passed in any one but not in both the groups of the Professional (Education-II) is granted exemption from passing the same group in PCE, i.e., if a student has passed Group I of Professional Education (Course-II) he is granted exemption from appearing in Group I of PCE, or if a student has passed Group II of Professional Education (Examination-II) he is granted exemption from appearing in Group II of PCE.

RECENT PUBLICATIONS OF THE BOARD OF STUDIES

| | English Rs. | Hindi Rs. | Postal Charges By Registered Parcel | |
|--|----------------|--------------|--|--------------|
| | | | English Rs. | Hindi Rs. |
| I. STUDY MATERIALS | | | | |
| COMMON PROFICIENCY TEST (CPT) | | | | |
| Fundamentals of Accounting | 200 | 140 | | |
| Mercantile Laws | 50 | 40 | | |
| General Economics | 100 | 70 | | |
| Quantitative Aptitude | 250 | 150 | | |
| Self Assessment CD | <u>40</u> | <u>40</u> | | |
| | <u>640</u> | <u>440</u> | 145 | 145 |
| PROFESSIONAL COMPETENCE COURSE (PCC) | | | | |
| Group I | | | | |
| Advanced Accounting Vol. I & Vol. II | 500 | 500 | | |
| Auditing and Assurance Vol. I | 175 | 175 | | |
| Auditing & Assurance Standards & Guidance Note (English) Vol. II | 100 | | | |
| Law, Ethics and Communication | <u>275</u> | <u>275</u> | | |
| | <u>1050</u> | <u>950</u> | 215 | 215 |
| Group II | | | | |
| Cost Accounting & Financial Management | 300 | 300 | | |
| Taxation | 200 | 200 | | |
| Information Technology | 150 | 150 | | |
| Strategic Management | <u>100</u> | <u>100</u> | | |
| | <u>750</u> | <u>750</u> | 180 | 180 |
| Both Groups | <u>1800</u> | <u>1700</u> | 395 | 395 |
| FINAL (NEW COURSE) | | | | |
| Group I | | | | |
| Financial Reporting | 600 | | | |
| Strategic Financial Management | 260 | | | |
| Advanced Auditing and Professional Ethics | 520 | | | |
| Corporate and Allied Laws | <u>200</u> | | | |
| | <u>1580</u> | | 320 | |
| Group II | | | | |
| Advanced Management Accounting | 240 | | | |
| Information Systems Control and Audit | 150 | | | |
| Direct Tax Laws | 340 | | | |
| Indirect Tax laws | <u>290</u> | | | |
| | <u>1020</u> | | 225 | |
| Both Groups | 2600 | | 540 | |
| Information Technology Training Course Material | | | | |
| Information Technology Training Programme - Modules I & II | 500 | | 90 | |
| II. COMPILATIONS OF SUGGESTED ANSWERS | | | | |
| Professional Education (Course-II) | | | | |
| Paper 1: Accounting (November, 1994 – November, 2006) | 60 | | 40 | |
| Paper 2: Auditing (May, 2000 – November, 2006) | 40 | | 40 | |
| Paper 3: Business and Corporate Laws (May, 2000 – November, 2006) | 60 | | 40 | |

| | | |
|---|-----|--|
| Paper 4 A: Cost Accounting (May, 1981 – November, 2006) | 60 | 40 |
| Paper 4 B: Financial Management (May, 1996 – November, 2006) | 60 | 40 |
| Final | | |
| Paper 1: Advanced Accounting (May, 1996 – November, 2006) | 70 | 40 |
| Paper 3: Advanced Auditing (May, 2000 – November, 2006) | 60 | 40 |
| IV. REVISION TEST PAPERS FOR MAY 2007 | | |
| Professional Education (Course –I) | 40 | 40 |
| Professional Education (Course –II) (Group I & II) | 80 | 55 |
| Final (Group I & II) | 80 | 55 |
| V. PROSPECTUS | | |
| 1. Common Proficiency Test – A Simplified Entry to the Chartered Accountancy Course | 100 | 40 |
| 2. Professional Competence Course – First Stage of Theoretical Education of the Chartered Accountancy Course inclusive of conversion form | | |
| – With Form Nos. 102 and 103 | 100 | 40 |
| – Without Form Nos. 102 and 103 | 50 | 40 |
| VI. MISCELLANEOUS | | |
| 1. Model Test paper Vol. I for CPT | 250 | 68 |
| 2. Model Test Paper Vol. I for PCC | 50 | 36 |
| 3. Students Guide to Accounting Standard 28: Impairment of Assets | 25 | 36 |
| 4. Supplementary Study Paper-2006 Income tax & Central Sales Tax for PE(Course-II) | 30 | 40 |
| 5. Supplementary Study Paper -2006 Direct tax and Indirect tax for Final Course | 60 | 40 |
| 6. Select cases Direct and Indirect Taxes – 2006 For Final Course | 40 | 40 |
| 7. Supplementary Study paper – 2007 Advanced Auditing for Final Course | 60 | 40 |
| 8. Training Guide | 80 | 40 |
| 9. Information Brochure about Common Proficiency Test – A Simplified Entry to the Chartered Accountancy Course Both in English and Hindi | | |
| 10. Information Brochure about Professional Competence Course – First Stage of Theoretical Education of the Chartered Accountancy Both in English and Hindi | | Available free of cost in all Decentralised Offices and Branches of the Institute |
| 11. Information Brochure on 100 Hours Information Technology Training | | |
| 12. Information Brochure about Chartered Accountancy - Global Career Opportunities through a premier Professional Institute Both in English and Hindi | | |
| VII. COMPACT DISCS (CDs) New Series | | |
| 1. Membership in Company - PE-II | 50 | 40 |
| 2. Capital Gains (Part I and Part II) - Final | 50 | 40 |
| 3. Insurance Claims - PE-I / CPT | 50 | 40 |
| 4. Hire Purchase and Instalment Payment - PE-II/PCC | 50 | 40 |
| 5. Taxation of Salaries - PE-II/ PCC | 50 | 40 |
| 6. Foreign Currency Translation-Part I - Final | 50 | 40 |
| 7. Foreign Currency Translation-Part 2 - Final | 50 | 40 |
| 8. Impairment of Assets - Final | 50 | 40 |
| 9. Standard Costing – Part 1 - Final | 50 | 40 |
| 10. Standard Costing – Part 2 - Final | 50 | 40 |

Applicability of various Publications for Professional Education (Examination –II)
to be held in November, 2007

Paper 1 : Accounting

Accounting Standards 1 to 29 [including revised AS 15(2005)].

For the students at PE-II level, Accounting Standards and Guidance Notes related to the topics given in the study material are more relevant. They are not expected to know in detail the advanced standards like Consolidated Financial Statements (AS 21), Accounting for Investments in Associates in Consolidated Financial Statements (AS 23), Discontinuing Operations (AS 24), Financial Reporting of Interests in Joint Ventures (AS 27), Impairment of Assets (AS 28) and Provisions, Contingent Liabilities and Contingent Assets (AS 29).

For the topic of Accounts of Insurance Companies, the Insurance Regulatory and Development Authority (Preparation of Financial Statements and Auditor's Report of Insurance Companies) Regulations, 2002 will be applicable.

The study material reprinted as on July, 2006 is relevant for November, 2007 Examination.

Paper 2 : Auditing

Auditing and Assurance Standards – 1 to 30.

Students at PE II level are expected to have familiarity with all these Auditing and Assurance Standards. They are expected to know in-depth only such Auditing Standards, which have been dealt within the main text of the study material.

Paper 3 : Business & Corporate Laws

The study material reprinted as on September, 2006 is relevant for November, 2007 Examination. There has been no legislative change since then.

Paper 5 : Income-tax and Central Sales Tax

Study Material for Income-tax and Central Sales Tax - June 2005 edition should be read along with "Professional Education (Course-II) – Supplementary Study Paper - 2006 – Income-tax and Central Sales-tax" containing amendments made by the Finance Act, 2006 relevant for assessment year 2007-08.

Note – For the purposes of setting the questions in Income-tax and central sales tax, the June 2005 edition of the study material and the "Supplementary Study Paper - 2006 – Income-tax and Central Sales-tax" containing the amendments made by the Finance Act, 2006, relevant for assessment year 2007-08 should be taken into account. The study material contains the amendments made by notifications/circulars/other legislations up to 30.04.2005 and the supplementary study paper – 2006 contains the amendments made by the Finance Act, 2006 as well as amendments made by notifications/circulars/other legislations between 1.5.05 and 30.04.2006. Further, the amendments made between 1.05.2006 and 30.4.2007 would be published in the Revision Test Papers for November 2007 examination. All these amendments are relevant for November 2007 examination and hence should be taken into account for the purpose of setting questions for this exam.