FINAL
GROUP-II PAPER-5
ADVANCED MANAGEMENT ACCOUNTING

MAY 2013

Roll No. .....

Total No. of Questions – **7**

Total No. of Printed Pages – **8**

Time Allowed – **3** Hours

Maximum Marks – **100**

# LOK

Answers to questions are to be given only in English except in the case of candidates who have opted for Hindi Medium. If a candidate has not opted for Hindi medium, his answers in Hindi will not be valued.

Question No. **1** is compulsory. Answer any **5** questions out of the remaining **six** questions.

Working notes should form part of the answer.

No statistical or other table is to be distributed along with this question paper.

**Marks**

1. (a) A process industry unit manufactures three joint products : A, B and C. C has no realisable value unless it undergoes further processing after the point of separation. The cost details of C are as follows : **5**

| | **Per Unit** |
|---|---|
| | ₹ |
| Upto point of separation | |
| Marginal cost | 30 |
| Fixed cost | 20 |
| After point of separation | |
| Marginal cost | 15 |
| Fixed cost | 5 |
| | **70** |

C can be sold at ₹ 37 per unit and no more.

(i) Would you recommend production of C ?

(ii) Would your recommendation be different if A, B and C are not joint products ?

**LOK** **Marks**

(b) HTM Ltd., by using 12,00,000 units of a material M produces jointly 2,00,000 units of H and 4,00,000 units of T. The costs and sales details are as under : **5**

| | ₹ |
|---|---|
| Direct material M @ ₹ 5 per unit | 60,00,000 |
| Other variable costs | 42,00,000 |
| Total fixed costs | 18,00,000 |
| Selling price of H per unit | 25 |
| Selling price of T per unit | 20 |

The company receives an additional order for 40,000 units of T at the rate of ₹ 15 per unit. If this order has been accepted, the existing price of T will not be affected. However, the present price of H should be reduced evenly on the entire sale of H to market the additional units to be produced.

Find the minimum average unit price to be charged on H to sustain the increased sales.

(c) Prescribe the steps to be followed to solve an assignment problem. **5**

(d) X Ltd. wants to replace one of its old machines. Three alternative machines namely $M_1$, $M_2$ and $M_3$ are under its consideration. The costs associated with these machines are as under : **5**

| | $M_1$ | $M_2$ | $M_3$ |
|---|---|---|---|
| | ₹ | ₹ | ₹ |
| Direct material cost p.u. | 50 | 100 | 150 |
| Direct labour cost p.u. | 40 | 70 | 200 |
| Variable overhead p.u. | 10 | 30 | 50 |
| Fixed cost p.a. | 2,50,000 | 1,50,000 | 70,000 |

You are required to compute the cost indifference points for these alternatives. Based on these points suggest a most economical alternative machine to replace the old one when the expected level of annual production is 1200 units.

Marks

2. (a) DEF Bank operated for years under the assumption that profitability can be increased by increasing Rupee volumes. But that has not been the case. Cost Analysis has revealed the following : **8**

| Activity | Activity Cost (₹) | Activity Driver | Activity Capacity |
|---|---|---|---|
| Providing ATM service | 1,00,000 | No. of transactions | 2,00,000 |
| Computer processing | 10,00,000 | No. of transactions | 25,00,000 |
| Issuing Statements | 8,00,000 | No. of statements | 5,00,000 |
| Customer inquiries | 3,60,000 | Telephone minutes | 6,00,000 |

The following annual information on three products was also made available :

| | Checking Accounts | Personal Loans | Gold Visa |
|---|---|---|---|
| Units of product | 30,000 | 5,000 | 10,000 |
| ATM transactions | 1,80,000 | 0 | 20,000 |
| Computer transactions | 20,00,000 | 2,00,000 | 3,00,000 |
| Number of statements | 3,00,000 | 50,000 | 1,50,000 |
| Telephone minutes | 3,50,000 | 90,000 | 1,60,000 |

**Required :**

(i) Calculate rates for each activity.

(ii) Using the rates computed in requirement (i), calculate the cost of each product.

(b) KG Ltd. is engaged in the production of two products K and G. One unit of product K requires two units of material A and four units of material B. Each unit of product G needs four units of material A, two units of material B and four units of material C. Material C is locally produced in the factory of the company by using two units of material B for each unit of C. **8**

**LOK** **Marks**

Materials A and B are purchased in the open market. Production of products K, G and C is carried out evenly throughout the year. At present the company has purchased its 3 months requirements of A and B in one purchase. That is four purchases per annum. The other particulars provided by the company are :

| | **Products** | |
|---|---|---|
| | **K Units** | **G Units** |
| Budgeted sales for the next year | 40,000 | 75,000 |
| Desired stock at the end of the year | 5,000 | 10,000 |
| Expected stock at the beginning of the year | 15,000 | 25,000 |

| | **Products** | |
|---|---|---|
| | **A** | **B** |
| Purchase price p.u. (₹) | 15 | 25 |
| Ordering cost per order (₹) | 1,000 | 1,000 |
| Carrying cost p.a. | 10% | 10% |

You are required to :

(i) Prepare a production budget and a material requirement budget for the next year.

(ii) Calculate the number of material purchases to be made, if the company wants to purchase materials in optimal quantity.

3. (a) A company manufactures two products A and B, involving three departments – Machining, Fabrication and Assembly. The process time, profit/unit and total capacity of each department is given in the following table : **8**

| | **Machining (hours)** | **Fabrication (hours)** | **Assembly (hours)** | **Profit (₹)** |
|---|---|---|---|---|
| A | 1 | 5 | 3 | 80 |
| B | 2 | 4 | 1 | 100 |
| Capacity | 720 | 1800 | 900 | |

Set up Linear Programming problem to maximize profits. What will be the product-mix at maximum profit level ? What will be the profit ?

Marks

(b) The following are the information regarding overheads of a company : **8**

(a) Overheads cost variance = ₹ 2,800 (A)

(b) Overheads volume variance = ₹ 2,000 (A)

(c) Budgeted overheads – ₹ 12,000

(d) Actual overhead recovery rate - ₹ 8 per hour

(e) Budgeted hours for the period – 2400 hours

You are required to compute the following :

(i) Overheads expenditure variance.

(ii) Actual incurred overheads.

(iii) Actual hours for actual production.

(iv) Overheads capacity variance.

(v) Overheads efficiency variance.

(vi) Standard hours for actual production.

4. (a) XYZ Company has three plants and four warehouses. The supply and demand in units and the corresponding transportation costs are given. The table below shows the details taken from the solution procedure of the transportation problem : **8**

| | | WAREHOUSES I | II | III | IV | Supply |
|---|---|---|---|---|---|---|
| Plants | A | 5 | 10 | 4 (10) | 5 | 10 |
| | B | 6 (20) | 8 | 7 | 2 (5) | 25 |
| | C | 4 (5) | 2 (10) | 5 (5) | 7 | 20 |
| | Demand | 25 | 10 | 15 | 5 | |

Answer the following questions. Give brief reasons :

(i) Is this solution feasible ?

(ii) Is this solution degenerate ?

(iii) Is this solution optimum ?

Marks

(b) Gupta Ltd. produces 4 products P, Q, R and S by using three different machines X, Y and Z. Each machine capacity is limited to 6000 hours per month. The details given below are for July, 2013 : **8**

| | P | Q | R | S |
|---|---|---|---|---|
| Selling price p.u. (₹) | 10,000 | 8,000 | 6,000 | 4,000 |
| Variable cost p.u. (₹) | 7,000 | 5,600 | 4,000 | 2,800 |
| Machine hours required p.u. | | | | |
| Machine X | 20 | 12 | 4 | 2 |
| Machine Y | 20 | 18 | 6 | 3 |
| Machine Z | 20 | 6 | 2 | 1 |
| Expected Demand (units) | 200 | 200 | 200 | 200 |

Required :

(i) Find out the bottleneck activity.

(ii) Allocate the machine hours on the basis of the bottleneck.

(iii) Ascertain the profit expected in the month if the monthly fixed cost amounts to ₹ 9,50,000.

(iv) Calculate the unused spare hours of each machine.

5. (a) Better and Best Ltd. manufacture only one product. Production is regular throughout the year and the capacity of the factory is 1,50,000 units per annum. The summarized Profit and Loss Account for the year ended 31st December is being reviewed by the Board of Directors. **12**

| | ₹ |
|---|---|
| Sales @ ₹ 10 per unit | 10,00,000 |
| Cost of sales : | |
| Direct materials | 2,50,000 |
| Direct labour | 1,50,000 |

Marks

| | ₹ |
|---|---|
| Production overheads : | |
| Variable | 30,000 |
| Fixed | 2,30,000 |
| Administrative overheads : | |
| Fixed | 1,00,000 |
| Selling and distribution overhead : | |
| Variable | 50,000 |
| Fixed | 1,50,000 |

(i) The Production Director proposed to reduce selling price to ₹ 9 in order to utilize full capacity.

(ii) The Sales Director proposed to increase selling price by 20 per-cent. By spending ₹ 2,25,000 on advertisement, sales will be increased to 1,20,000 units per annum.

(iii) The Personnel Director pleaded for a change in the method of wage payment. For the present piece rate of ₹ 1.50 per unit, a bonus scheme (for each 2% increase in production over the target, there would be an increase of 1% in the basic wage of each employee) will be implemented. A target of 2,000 units per week for the company will be set for 50 week year. Selling price increase by 10%. With an additional advertisement cost of ₹ 1,60,000, 20% increase in present sales will be achieved.

(iv) The Chairman felt that the packaging of the product required improvement. He wanted to know the sales required to earn a target profit of 10% on turnover with the introduction of an improved packing at an additional cost of 20 paise per unit (no change in selling price).

You are required to evaluate individually the proposals of each of the board member and give your recommendation.

(b) What do you mean by DPP ? What are its benefits ? **4**

Marks

6. (a) The Noida Nirman Authority intends to install a road traffic regulating signal in a heavy traffic prone area. The total installation work has been broken down into six activities. The normal duration, crash duration and crashing cost of the activities are expected as given in the following table : 7

| Activity | Normal Duration (Days) | Crash Duration (Days) | Crashing Cost per day ₹ |
|---|---|---|---|
| 1 – 2 | 9 | 6 | 30,000 |
| 1 – 3 | 8 | 5 | 40,000 |
| 1 – 4 | 15 | 10 | 45,000 |
| 2 – 4 | 5 | 3 | 15,000 |
| 3 – 4 | 10 | 6 | 20,000 |
| 4 – 5 | 2 | 1 | 60,000 |

You are required to :

(i) draw the network and find the normal and minimum duration of the work.

(ii) compute the additional cost involved if the authority wants to complete the work in the shortest duration.

(b) Bring out the main applications of Learning Curve. 4

(c) State the advantages available in inter-firm comparison. 5

7. Answer any **four** of the following questions :

(a) What are the focuses of Theory of Constraints ? How it differs with regard to cost behaviour ? 4

(b) Brief the reasons for using simulation technique to solve problems. 4

(c) List out the qualities required for a good pricing policy. 4

(d) Under what circumstance PERT is more relevant ? How ? 4

(e) Enumerate the expected disadvantages in taking divisions as profit centres. 4

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