## PG-517

# II Semester M.Com. (CBCS) Examination, July - 2019 

## FINANCE AND ACCOUNTING

2.5 : Strategic Cost and Management Accounting

## Time : 3 Hours

Instruction : Answer all sub-sections.

## SECTION - A

1. Answer any seven questions from the following. Each question carries two marks.
(a) Give the meaning of Experience Curve.
(b) Differentiate between Skimming and Penetration pricing.
(c) State any two situations where marginal cost based pricing is suitable.
(d) Name the 6 R's of Business Process Re-Engineering.
(e) What is out of pocket costs ?
(f) State the steps in Target Costing.
(g) What do you mean by Balanced Score Card ?
(h) Define ABC.
(i) State any four sources of waste.
(j) State 4 objectives of JIT.

## SECTION - B

Answer any four from the following. Each question carries five marks. $4 \times 5=20$
2. What are the inadequacies of traditional methods of overhead absorption ?
3. Define Target Costing. Briefly explain the benefits of Target Costing.
4. Explain the activities and phases in product life-cycle.
5. Poshith Ltd. has furnished the following cost data which is given below :

Direct Materials - ₹ 22.40
Direct Wages - ₹ 6.00
Variable Overheads - ₹ 1.60
Fixed factory overheads - ₹ $13,20,000$ p.a.
Fixed selling and administration overheads - ₹ $7,20,000$ p.a.
Annual Sales - 8,00,000 units
Capital employed in fixed assets - ₹ $18,00,000$
Capital employed in current assets - $50 \%$ of sales
Determine the selling price per unit to yield $20 \%$ return on capital employed.
6. Beepika from Mysuru presently operates a plant at $80 \%$ of the normal capacity to manufacture a product only to meet the demand of Government of Tamil Nadu under a rate contract. She supplies the product for ₹ $4,00,000$ and earns a profit margin of $20 \%$ on sales realisations. Direct cost per unit is constant.

The indirect costs as per her budget projections are :

| Indirect costs | 20,000 units <br> $80 \%$ capacity <br> $₹$ | 22,500 units <br> $90 \%$ capacity <br> $₹$ | 25,000 units <br> $100 \%$ capacity <br> $₹$ |
| :--- | :---: | :---: | :---: |
| Variable | 80,000 | 90,000 | $1,00,000$ |
| Semi-Variable | 40,000 | 42,500 | 45,000 |
| Fixed | 80,000 | 80,000 | 80,000 |

She has received an export order for the product equal to $20 \%$ of its present operations. Additional packing charges on this order will be ₹ 1,000 .
Arrive at the price to be quoted for the export order to give her a profit margin of $10 \%$ on the export price.
7. A Company is considering cost saving project. This involves purchasing a machine costing ₹ $10,00,000$, which will result in annual savings of ₹ $1,50,000$ and on material costs of $₹ 80,000$. The following forecasts are made of the rates of inflation each year for the next 5 years :
Direct Material Cost $=5 \%$
Direct Wage cost $=10 \%$
General Prices $=6 \%$
The Cost of Capital of the Company, in monetary terms is $15 \%$. Evaluate the project assuming that the machine has life of 5 years and no scrap value. (P.V. Factor @ $15 \%$ for 5 years $=0.869,0.756,0.657,0.571,0.497$ )

## SECTION - C

Answer any three from the following. Each question carries twelve marks.
8. Answer the following sub-questions in brief :
$3 \times 12=36$
(a) What are the strategic cost management issues in elements of materials and labour faced by the company ?
(b) Explain the advantages of JIT in brief.
9. Explain in detail the role of cost accounting in strategic planning and management control.
10. Electrical Ltd., plans to introduce two products $D$ and $J$ in the market. These will be manufactured in Department P, which will be treated as a profit centre.

Production volumes and costs are estimated as follows :

| Product | D | J |
| :--- | :---: | :---: |
| Annual production(units) | $6,00,000$ | $10,00,000$ |
| Direct material cost per unit | 300 | 360 |
| Direct labour cost per unit (₹ 20 per hour) | 600 | 840 |

The proportion of overheads other than interest, chargeable to two products $D$ and $J$ are as under :

| Factory overheads | (50\% fixed) | $100 \%$ of direct wages |
| :--- | :--- | :--- |
| Administration <br> overheads | (100\% fixed) | $10 \%$ of factory cost |
| Selling and <br> distribution <br> overheads | (50\% variable) | $₹ 30$ and ₹ 40 <br> respectively per unit <br> of D and J |

The fixed capital investment in the department will be $₹ 2,500$ lakhs. The working capital requirement is equivalent to six month's stock of cost of sales of both the products. To finance this project a term loan of $50 \%$ of working capital required has been obtained from a financial institution at an interest rate of $18 \%$ per annum. Department $P$ is expected to give a return of $20 \%$ on capital employed.

## Required :

(a) Unit selling price for products $D$ and $J$ such that the contribution per labour hour (rounded up to the next higher integer), is the same for both the products.
(b) Statement of over-all profitability expected.
11. A Machine used on a production line must be replaced at least every four years. The costs incurred in running the machine according to its age are

| Age of the Machinery (in years) |  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: |
| PARTICULARS | $\mathbf{0}$ | $\mathbf{1}$ | $\mathbf{2}$ | $\mathbf{3}$ | $\mathbf{4}$ |
| Purchase Price | $₹ 6,000$ | - | - | - | - |
| Maintenance | - | $₹ 1,600$ | $₹ 1,800$ | $₹ 2,000$ | $₹ 2,000$ |
| Repairs | - | - | $₹ 400$ | $₹ 800$ | $₹ 1,600$ |
| Net Realisable Value | - | $₹ 3,200$ | $₹ 2,400$ | $₹ 1,600$ | $₹ 800$ |

Further replacement will be identical machines with same costs. Revenue is unaffected by the age of the machine. The cost of capital is $15 \%$. Determine optimum replacement cycle. 0.6575 and 0.5718 respectively. Present value of annuity at $15 \%$ for years 1 , 2,3 and 4 are $0.8696,1.6257,2.2832$ and 2.8550 respectively.
12. Rama Company manufactures several products of varying levels of designs and models. It uses a single overhead recovery rate based on direct labour hours. The overheads incurred by the company in the first half of the year
are as under :

| Machine operation expenses | $₹ 15,18,750$ |
| :--- | ---: |
| Machine maintenance expenses | $₹ 2,81,250$ |
| Salaries to technical staff | $₹ 9,56,250$ |
| Wages and Salaries of stores staff | $₹ 3,93,750$ |

During this period the company introduced ABC system and the following significant activities were identified.

- Receiving materials and components.
- Set-up of Machines for production runs.
- Quality inspection.

It is also determined that :

- The machine operation and machine maintenance expenses should be apportioned between stores and production acitivity in 20:80 ratio.
- The technical staff salaries should be apportioned between machine maintenance, set-up and quality inspection in 30:40:30 ratio.

The consumption of activities during the period under review is as under :

| Direct Labour Hours worked | 60,000 |
| :--- | :---: |
| Direct wage rate | $₹ 9 / \mathrm{hr}$ |
| Production set-ups | 3,060 |
| Materials and component consignment received from suppliers | 2,940 |
| Number of quality inspections carried out | 1,920 |

The data relating to two products manufactured by the company during the period are as under :

| Particulars | Products |  |
| :--- | ---: | ---: |
|  | P | Q |
| Direct Materials costs | $₹ 9,000$ | $₹ 6,000$ |
| Direct Labour hours | 1,440 | 150 |
| Direct material consignments received | 72 | 78 |
| Production runs | 54 | 36 |
| Number of quality inspections done | 45 | 15 |
| Quantity produced (units) | 22,500 | 7,500 |

A potential customer has approached the company for the supply of 36,000 units, a component ' $X$ ' to be delivered in lots of 4,500 units per quarter. The job will involve an initial design cost of ₹ 90,000 and the manufacture will involve the following per quarter.

| Direct Material costs | $₹ 18,000$ |
| :--- | ---: |
| Direct Labour Hours | 450 |
| Production runs | 9 |
| Inspections | 36 |
| Number of consignments of direct materials to be received | 30 |

The company may desire a mark-up of $25 \%$ on cost.

## Required :

(a) Calculate the cost of products $P$ and $Q$ based on the existing system of single overhead recovery rate.
(b) Determine the cost of products P and Q using ABC system.
(c) Compare the sales value per quarter of component ' X ' using activity based costing system.

