

**Paper- 15: Management Accounting-Performance Management**

Time Allowed: 3 Hours

Full Marks: 100

The figures in the margin on the right side indicate full marks.  
Attempt Question No. 1 (carrying 25 marks), which is compulsory and  
any five more questions (each carrying 15 marks) from the rest.

Working Notes should form part of the answer.

“Wherever necessary, suitable assumptions should be made and indicated in answer by the candidates.”

1.

- a) State whether the following statements given below are 'True' or 'False'. If True, simply rewrite the given statement (= 1 mark). If False, state it as False (= ½ marks) and rewrite the correct statement (=½ mark): [5]
- i) The term Value has four different meanings- Exchange value, cost value, use value and wealth value.
  - ii) ERP bridges the information gap across the organization.
  - iii) In fact, the 'effectors' is another name for management information system.(MIS)
  - iv) A 'level strategy', one of Aggregate Planning Strategies, implies matching demand and capacity period by period.
  - v) The key factors of 'Theory of Constraints' are Contribution and Profit.
- b) Fill in the blanks with the most appropriate words: [5]
- i) ..... Philosophy suggests that a firm should eliminate any reliance upon the EOQ.
  - ii) ..... is a Japanese strategy for continuous improvement.
  - iii) The concept of ..... emphasizes linkage among all of the value-adding activities.
  - iv) A Customer FAST diagram is usually applied to ..... product.
  - v) ..... has become a standard practice among many organizations as a way to add flexibility to chain.
- c) Choose the correct one: [5×2=10]
- i) A company makes and sells a single product. The selling price and marginal revenue equations are: Selling price = ₹ 50 – ₹ 0.001X
- Marginal revenue = ₹50 – ₹0.002 X
- Where X is the no. of product the company makes. The variable costs amount to ₹ 20 per unit and the fixed costs are ₹1,00,000.
- In order to maximize the profit, the selling price should be
- A. ₹ 32
  - B. ₹ 25
  - C. ₹ 35
  - D. ₹40

## PTP\_Final\_Syllabus 2008\_Jun2014\_Set 1

- ii) Nova Manufacturing Company manufactures two products using common material handling facility. The total budgeted material handling cost is ₹60,000. The other details are:

	Product X	Product Y
Number of units produced	30	30
Material moves per product line	5	15
Direct labour hour per unit	20	20

Under Activity Based Costing system the material handling cost to be allocated to product X (per unit) would be:

- A. ₹1,000  
B. ₹ 500  
C. ₹1,500  
D. ₹ 2,500
- iii) The current price of a product is ₹8,000 per unit and it has been estimated that for every ₹200 per unit reduction in price, the current level of sale, which is 10 units, can be increased by 1 unit. The existing capacity of the company allows a production of 15 units of the product. The variable cost is ₹4,000 per unit for the first 10 units, thereafter each unit will cost ₹400 more than the preceding one. The most profitable level of output for the company for the product will be
- A. 11 units  
B. 12 units  
C. 13 units  
D. 14 units
- iv) A company is preparing a quotation for a new product. The time taken for the first unit is 30 hours. The company expects 85% learning curve (index is  $-0.2345$ ). The company desires that the quotation should be based on the time taken for the final output within the learning period which is expected to end after the company has produced 200 units.
- The time per unit of product to be used for the quotation is:
- A. 13.34 hours  
B. 25.50 hours  
C. 30.00 hours  
D. 6.67 hours
- v) A company proposes to undertake a capital project. The life of the project is 4 years and the annual cash inflows are estimated at ₹40,000. The internal rate of return of the project is 15% and the cumulative present value factor for 15% for 4 years is 2.855. The profitability index is 1.064.
- The net present value of the project is
- A. ₹ 6,870  
B. ₹ 10,000  
C. ₹ 10,000  
D. ₹ 14,200

d) Expand the following abbreviations:

[5]

## PTP\_Final\_Syllabus 2008\_Jun2014\_Set 1

- i) JUSE
- ii) FMEA
- iii) EFQM
- iv) SCRS
- v) CPOF

2.

a) Write down a list of recommendations to facilitate initially using QFD. [5]

b) Kotoky Company of Hyderabad imports exotic perfume, named AXC, from France and markets same to shops in India. As the perfume market is very competitive, the company's directors believed that a change in marketing strategy would be beneficial. By reducing the selling price to the shops they wanted to achieve a greater sales volume. The company was able to negotiate a lower price with the French bottler for all of its purchases. This strategy did not have any effect on the company's fixed costs. The change in marketing strategy took place on 1 April 2012.

Kotoky's AXC sales results for 2011-2012 and 2012-2013 are summarized as under:

	2011 - 12	2012 - 13
1. Number of bottles of AXC bought and sold	10 Lakhs	12 Lakhs
2. Selling price bottle	₹50	₹40
3. Cost price per bottle	₹30	₹27

Required:

- (i) Calculate the change in contribution caused by the change in strategy.
- (ii) Analyse the figure calculated in (i) into the growth aspect, the price aspect, and the productivity (usage) aspect.
- (iii) Briefly explain and comment on how successful the change in strategy was and why.

[3+3+4=10]

3.

a) What are the benefits accruing from implementation of a TQM programmed in an organization? [5]

b) The operating results of a department provide the following information for a particular week:

Average output per week	48,000 unit
Saleable value of output	₹60,000
Contribution on above	₹24,000

The management is contemplating to bring about more mechanisation in the department at a capital cost of ₹16,000 which will result in reduction in number of workmen from the present strength of 160 nos. to 120 nos. However, due to mechanical help, the output of individual workmen will increase by 60%. The existing piece rate is ₹ 0.10 per article and as an incentive, the management propose to increase the existing piece rate by 5% for every 10% increase in the individual output achieved. There will be a reduction in sale price by 4% to sell the increased production.

You are required to calculate extra weekly contribution resulting due to proposed changes. [10]

4.

a) As a result of change in consumer preference the company of which you are the Management Accountant finds that certain materials in stock which were bought for ₹ 7,000 a few year ago have not moved for a long time. The current replacement price of

## PTP\_Final\_Syllabus 2008\_Jun2014\_Set 1

these material is ₹ 8,000. If these materials were disposed of by sale, they would fetch a net realizable value of ₹4,000 only.

The company has the opportunity of carrying out a one time job (Job 101) which can utilize material and yield a revenue of ₹16,000. The additional costs, other than the cost of these materials, chargeable to this will amount to ₹ 14,200. This charge includes the apportionment of general administration overhead amounting to ₹3,800, but the incurrence of all other expenses is dependent upon the execution of job 101.

Alternatively, the materials in question could be used as a substitute for other materials in another regular job (Job 208). The materials so replaced will otherwise cost ₹ 6,000. These costs have been included in the viability of job 208 which is expected to yield an additional net benefit of ₹ 11,000.

The company has thus three alternatives namely:

- I. use of the material in Job 208
- II. use the material in Job 101 and carry out Job 208 by buying in the material required; and
- III. sell the materials and carry out Job 208 by buying in the materials required.

You are required to:

- i) State with reasons the costs which are irrelevant to the decision of alternative choices.
  - ii) Evaluate the three alternatives given above by using the concept of;
    - A. Incremental cost and benefit analysis;
    - B. Opportunity cost and benefit analysis.
  - iii) State which of the alternative should be accepted by the company. [3+5+2=10]
- b) In what circumstances is a company justified in selling its products at a price below variable cost? [5]

5.

- a) The Secretary of a School is taking bids on the City's four school bus routes. Four companies have made the bids as detailed in the following table:

Company	Bids for Routes (in ₹)			
	R1	R2	R3	R4
C1	4000	5000	---	---
C2	---	4000	---	4000
C3	3000	---	2000	---
C4	---	---	4000	5000

Each bidder can be assigned only one route. Determine the minimum cost of running the four bus routes. [10]

- b) What are the problems associated with sensitivity analysis in a business context? [5]

6.

- a) X uses traditional standard costing system. The inspection and setup costs are actually ₹ 1,760 against a budget of ₹ 2,000.

ABC system is being implemented and accordingly, the number of batches is identified as the cost driver for inspection and setup costs. The budgeted production is 10,000 units in batches of 1,000 units, whereas actually, 8,800 units were produced in 11 batches.

- (i) Find the volume and total fixed overhead variance under the traditional standard costing system.
- (ii) Find total fixed overhead cost variance under the ABC system. [4+6]

## PTP\_Final\_Syllabus 2008\_Jun2014\_Set 1

---

- b) Write down the quality management principle for improved organization performance. [5]

7.

- a) Company manufactures a single product, which requires two components. The Company purchases one of the components from two Suppliers: X Ltd and Y Ltd.

The price quoted by X Ltd is ₹ 180 per hundred units of the component and it is found that on an average 3% of the total receipt from this Supplier is defective. The corresponding quotation from Y Ltd is ₹ 174 per hundred units, but the defective would go up to 5%. If the defectives are not detected, they are utilized in production causing a damage of ₹ 180 per 100 units of the component.

The Company intends to introduce a system of inspection for the components on receipt. The inspection cost is estimated at ₹ 24 per 100 units of the component. Such an inspection will be able to detect only 90% of the defective components received. No payment will be made for components found to be defective in inspection.

Required:

1. Advise whether inspection at the point of receipt is justified?
2. Which of the Suppliers should be asked to supply? Assume total requirement is 10,000 units of the component. [4+6]

- b) Explain the classes of Firms using MRP and MRPII. [5]

8. Write short notes on any three: [5×3=15]

- (a) Uses of the learning curve.
- (b) DRUM-BUFFER-ROPE.
- (c) Step in strategies bench trending
- (d) PDCA