

Total No. of Questions : 12]

SEAT No. :

**P3780**

**[4760]-98**

**[Total No. of Pages : 4**

**M.E. (Mechanical)**

**(Common to Mechanical-Heat Power, Design,**

**Automotive and Mechatronics)**

**TECHNOLOGY AND FINANCIAL MANAGEMENT**

**(2008 Course) (Semester-I)**

*Time : 3 Hours]*

*[Max. Marks : 100*

*Instructions to the candidates:*

- 1) Answer any three questions from each section.*
- 2) Neat diagrams must be drawn wherever necessary.*
- 3) Figures to the right indicate full marks.*
- 4) Use of electronic pocket calculator is allowed.*
- 5) Assume suitable data, if necessary.*

**SECTION-I**

- Q1)** a) Distinguish between 'Flexible budget' and 'Fixed Budget'? What are the main features of a budgetary control system. **[10]**
- b) Define 'budget' and 'budgetary control'. Discuss the cardinal features and objectives of budgetary control. **[6]**

**OR**

- Q2)** Write short notes on the following: **[16]**
- a) Functional budget.
  - b) Forces driving global economy.
  - c) Sources of short term finance.
  - d) Functions of finance.

- Q3)** a) What do you mean by marginal costing? Explain with an example how do income statements prepared under the absorption costing and marginal costing concepts differ? **[8]**

**P.T.O.**

- b) A company makes plastic buckets. An analysis of their accounting reveals the following: **[10]**

Variable cost per bucket : Rs. 20  
Fixed cost : Rs. 50000 per year  
Capacity : 2000 buckets per year  
Selling price per bucket : Rs. 70

- i) Calculate the break-even point.  
ii) Find the number of buckets to be sold to get a profit of Rs. 30000.  
iii) If the company can manufacture 600 buckets more per year with an additional fixed cost of Rs. 2000, what should be the selling price to maintain the profit per bucket as at (ii) above?

OR

- Q4)** a) Explain the different methods of computing profits on contracts, where work is not completed at the close of the accounting year? **[8]**  
b) What are the characteristics of process costing? **[5]**  
c) Explain in brief the stages and flow of costs in Activity Based Costing? **[5]**

- Q5)** a) Distinguish between micro economics and macro economics. **[6]**  
b) Explain the theory of consumer's demand with the help of indifference curve analysis. Also explain Income effect and substitution effect? **[10]**

OR

- Q6)** a) How does international trade affects domestic market? Explain in brief the methods to protect domestic trade? **[12]**  
b) Distinguish between monopoly and oligopoly types of competition. **[4]**

## **SECTION-II**

**Q7)** a) Define Total Quality Management (TQM). What are the elements and principles of TQM? [10]

b) Explain KAIZEN duties in different levels of management. [6]

OR

**Q8)** a) Explain the Deming's 14 point approach to Quality Management. [8]

b) What is Juran trilogy diagram? Explain its importance in quality management. [8]

**Q9)** A small engineering project consists of set of activities whose three time estimates in days are given below:

Activity	Optimistic time	Most likely time	Pessimistic time
1-2	2	5	14
1-6	2	5	8
2-3	5	11	28
2-4	1	4	7
3-5	5	11	17
4-5	3	5	14
6-7	3	9	27
5-8	2	2	8
7-8	7	13	23

Draw the PERT network diagram and identify the critical path and critical path duration. [7]

i) Calculate the standard deviation, variance, EST, LST, total slack for each activity. [8]

ii) Calculate the variance of critical path. [3]

OR

- Q10)a)** Explain the stages involved in project life cycle with a neat line diagram. [6]
- b) Explain the concept of BOT in brief. [6]
- c) Distinguish between PERT and CPM. [6]

- Q11)a)** Define personnel management. State the objectives and principles of personnel management. [10]
- b) Distinguish between autocratic and supportive models of organizational behavior. [6]

OR

- Q12)a)** Define merit rating. State and describe any three methods of merit rating. [10]
- b) Explain the process of Management by Objectives. [6]

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