

S'06 : 3 FN : IC 402 (1411)

ENGINEERING MANAGEMENT

Time : Three hours

Maximum Marks : 100

*Answer FIVE questions, taking ANY TWO from Group A,
ANY TWO from Group B and ALL from Group C.*

*All parts of a question (a, b, etc.) should
be answered at one place.*

*Answer should be brief and to-the-point and be supplemented
with neat sketches. Unnecessary long answers may
result in loss of marks.*

*Any missing data or wrong data may be assumed suitably giving
proper justification.*

Figures on the right-hand side margin indicate full marks .

Group A

1. (a) Outline the fundamental elements of a planning system. 2
- (b) Identify and briefly discuss the planning situations associated with the use of a conversion system. 8
- (c) Explain how the four C's model can be used to evaluate an organization's human resource management programme ? 10

(Turn Over)

2. (a) Elucidate the sequence of activities for exercising managerial control in organization. 6
- (b) Define the directing function of management. 2
- (c) Distinguish between : 6
- (i) Upward and Downward communication
- (ii) Cooperation and Coordination.
- (d) What is meant by collective bargaining? Why is it referred to as a two way process? 6
3. (a) Explain Brown and Gibson model (1972) of plant location with a suitable example. 10
- (b) How are the organizational goals related to the organizational plans? 3
- (c) Show the hierarchy of objectives for a manufacturing organization. 7
4. (a) What relationship exists between the layout and location decisions? 4
- (b) Explain the essential feature of CRAFT, a computerized layout model. 4
- (c) Explain Total Productive Maintenance (TPM) with example. 7
- (d) What is bathtub curve? Explain. 5

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(2)

(Continued)

Group B

5. (a) A project schedule has the following characteristics :

Activity	Time	Activity	Time
1-2	4	5-6	4
1-3	1	5-7	8
2-4	1	6-8	1
3-4	1	7-8	2
3-5	6	8-10	5
4-9	5	9-10	7

- (i) Construct a network diagram. 4

- (ii) Determine critical path and total project duration. 4

- (b) Location A would result in annual fixed cost of Rs. 3 00 000 variable costs of Rs. 63/unit, and revenues of Rs. 68 /unit. Annual fixed cost at location B are Rs, 8 00 000, with variable costs of Rs. 32/unit and revenue of Rs. 68 /unit. Sales volume is estimated to be 25,000 units/ year. Which location is more attractive? 6

- (c) Differentiate between PERT and CPM with respect to their use, advantages, and disadvantages. 6

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(3)

(Turn Over)

6. (a) Distinguish among funds, working capital, net working capital, and income. 6
- (b) Differentiate between the current ratio and acid test. 5
- (c) Why is it possible for a firm to have high profits but still be unable to pay its bill when they are due? 3
- (d) Why do financial managers use a variety of measures of profits for firms? 6
7. (a) Explain the concept of managerial economics stating the important characteristics and major applications. 5
- (b) State and explain the laws of variable proportion or the law of diminishing return, giving the important assumptions. 5
- (c) Distinguish between data and information. Identify the various steps for converting data into information. 4
- (d) Mention the importance of management information system for an organization. State the requirements of an effective MIS. 6
8. (a) Outline the trends and challenges relating to quality in the present context of global competitiveness. 3
- (b) Explain briefly the concept of total control and total quality management (TQM). 3
- (c) Explain the following : 9
- (i) Pay back period

(ii) Net Present Value (NPV)

(iii) Internal Rate of Return (IRR).

(d) Elucidate the principles of marketing management with examples. 5

Group C

9. Answer the following questions very briefly : 2 × 10
- (i) What do you mean by scientific management? Who originated it?
- (ii) What is participative management? Why is it being practiced?
- (iii) Differentiate between continuous review and periodic review inventory models.
- (iv) What are the inputs to materials requirement planning (MRP)? Name them.
- (v) How does the balance sheet show the source of resources for a firm?
- (vi) The inventory of a company is Rs. 2.2 lacs, the current assets are Rs. 8 lacs and the current liabilities are Rs. 4 lacs. Determine the inventory to working capital ratio.
- (vii) A company has long-term debt of Rs. 5 lacs. The owners equity amount is Rs. 7.5 lacs. Determine the debt equity ratio.

- (viii) What is a Decision Support System (DSS)? Who should use them?
- (ix) What do you mean by Enterprise Resource Planning (ERP)?
- (x) What is Acceptance Sampling? Why should it be used?