

Total No. of Questions : 12]

SEAT No. :

P2391

[5153]-14

[Total No. of Pages : 3

T.E. (Mechanical Engineering)
INDUSTRIAL ENGINEERING AND TECHNOLOGY MANAGEMENT
(2008 Pattern) (Semester - I)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) Answer to the two Sections should be written in separate answer books.*
- 2) Answer any three questions from each section.*
- 3) Neat diagrams must be drawn wherever necessary.*
- 4) Figures to the right side indicate full marks.*
- 5) Assume Suitable data if necessary.*

SECTION - I

- Q1)** a) Illustrate different functions of management. **[8]**
b) Discuss the Contingency Theory of Organizations with example. **[8]**

OR

- Q2)** a) Discuss different leadership Approach/Styles with examples. **[8]**
b) Explain the concept of managerial grid with example. **[8]**

- Q3)** a) Discuss different factors affecting the plant location planning. **[8]**
b) Enlist the types of Plant Layout and explain Product Layout in detail. **[10]**

OR

- Q4)** a) Explain in brief, Single Facility Location Problem. **[10]**

Consider the following data on locating a new facility which has to serve 5 different existing facilities. The co-ordinates of the existing facilities are (30, 20), (40, 50), (30, 30), (15, 30) and (20, 40). The number of tons of material transported per year from the new facility to each of the existing facilities is given in the table below. Find the x and y co-ordinates of the new facility.

Existing Facility	1	2	3	4	5
Weights	1000	980	1500	2000	1750

- b) Write a short note on: Principles of Good Plant Layout and its application. **[8]**

P.T.O.

- Q5) a)** Explain the term Productivity with example and Discuss different factors affecting Productivity. [8]
- b) Discuss Time Study Procedure in detail. [8]

OR

- Q6) a)** Define the terms: [8]
- i) Capacity Planning
- ii) Aggregate Planning

And write a short note on: Procedure for Aggregate Production Planning.

- b) Explain in brief, ABC Analysis for selective inventory Control. [8]

The production department for a company requires 3600 kg of raw material for manufacturing a particular item/year. It has been estimated that cost of placing an order is Rs. 36 and cost of carrying an inventory is 25% of investment in inventories. The price is Rs. 10 kg. The purchase manager wishes to determine an ordering policy for raw material.

SECTION - II

- Q7) a)** Explain Meaning of Technology Management and discuss role and significance of technology and management. [8]
- b) Discuss impact of Technology on Society and Business. [10]

OR

- Q8) a)** Write a short note on: Evolution and Growth of Technology. [8]
- b) Explain in detail Process Technology and Product Technology with appropriate examples. [10]

- Q9) a)** Explain exploratory technological forecasting techniques. [8]
- b) Explain four phases of "S" curve with proper example. [8]

OR

Q10)a) Explain what you mean by morphological analysis by stating its applications. [8]

b) Explain technology monitoring process. [8]

Q11)a) Discuss key principles for developing technology strategy. [8]

b) Explain in detail the framework for formulating technology strategy. [8]

OR

Q12)a) Explain technology diffusion process. [8]

b) Explain in detail Steps used to adopt an appropriate technology for a particular application. [8]

