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B.Tech IV Year II Semester (R15) Regular Examinations April 2019

INDUSTRIAL ENGINEERING

(Mechanical Engineering)

Time: 3 hours Max. Marks: 70

PART – A

(Compulsory Question)

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1 Answer the following: (10 X 02 = 20 Marks)

(a) Define organization and list out different types of organizations.
(b) State Douglas McGregor's theory X and Y.
(c) What are the factors to be considered while selecting a plant location?
(d) List out any four material handling equipments used in continuous production.
(e) Define the terms: (i) Sampling. (ii) Performance rating.
(f) Give the various symbols used in recording techniques with their meaning.
(g) Give the examples for: (i) Direct inventories. (ii) Indirect inventories.
(h) Define the terms: (i) Set-up cost. (ii) Holding cost.
(i) What you mean by process control?
(j) Define the terms: (i) Quality of design. (ii) Quality of performance.

PART – B

(Answer all five units, 5 X 10 = 50 Marks)

UNIT – I

2 Describe the various steps involved in organizing procedure.

OR

3 Define management. Explain the functions of management with help of examples.

UNIT – II

4 Define plant layout. Explain different types of plant layouts.

OR

5 Explain the principles of material handling.

UNIT – III

6 State and explain the steps involved in method study procedure.

OR

7 How can you calculate the standard time using time study procedure?

UNIT – IV

8 Find the optimal order quantity for a product for which the price breaks are follows:

Quantity (Units)	Price per unit (Rs)
0 to 100	200
101 to 200	180
Above 200	160

The monthly demand of the product is 400 units. The storage cost is 20 percent per year of the price of the product per unit. Ordering cost is Rs.50 per order.

OR

9 A company has to purchase four items A, B, C and D for the next year. The projected demand and unit price (in Rs) are as follows:

Item	Demand (Units)	Unit price (Rs)
A	60000	3
B	40000	2
C	1200	24
D	5000	4

If the company wants to restrict the total number of orders to 40 for all the items. How many orders should be placed for each item?

UNIT – V

10 State the objectives of control charts and describe the different control charts for variable and attributes.

OR

11 Discuss the implementation of total quality management in manufacturing.

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