END TERM EXAMINATION

FIFTH SEMESTER [B.TECH] DECEMBER 2019

Paper Code: ETME-301   Subject: *Management of Manufacturing Systems*

Time: 3 Hours   Maximum Marks: 75

Note: Attempt any five questions including Q. No. 1 which is compulsory.
Select one question from each unit.

Q1   Attempt the following parts: (5x5=25)
(a) Explain the term Group Technology.
(b) Differentiate between Production and Productivity.
(c) Define time study. State its advantages and disadvantages.
(d) Define preventive maintenance and state its objectives.
(e) Enumerate the reasons for effective cost control.

UNIT-I

Q2   Describe the different types of layout. Also discuss in detail the advantages and disadvantages of each type.   (12.5)

Q3   Explain various types of organization structure. Describe each and discuss its advantages and limitations.   (12.5)

UNIT-II

Q4   (a) What is Demand Forecasting? What are the steps involved in demand forecasting? How the market strategies are affected due to forecasting?   (6.5)
(b) What is man and machine chart? How is it used to make a method analysis? Discuss flow process charts in detail.   (6)

Q5   (a) State and explain in brief various steps involved in Time and Method study procedure.   (8)
(b) Explain the following: (4.5)
   (i) SIMO Chart
   (ii) PMTS

UNIT-III

Q6   (a) Explain the role of predictive maintenance and describe how preventive maintenance is better than corrective maintenance.   (6.5)
(b) What is EOQ? Derive the formula for EOQ when shortage is allowed. Also discuss replacement policy.   (6)

Q7   (a) What is corrective maintenance? What are the advantages and disadvantages of corrective maintenance? How could it be reduced?
(b) An industry uses an item at the rate of 50,000 per year. The item costs Rs. 100/- per unit if purchased in lot sizes upto 999 and it costs Rs 95/- per unit if purchased in lot sizes of 2000 or more. The inventory carrying costs are 20% of the cost price per unit per year and ordering costs are Rs 350/- per order, find EOQ.

UNIT-IV

Q8   (a) Define the term Management. What are basic principles of management?   (6.5)
(b) What is break even chart? How it can be plotted? Explain cost centre.   (6)

Q9   (a) What do you understand by scientific management? Describe the importance of human relation skills to a manager.   (6.5)
(b) A factory producing only item, which it sells for Rs. 12.50 per unit has fixed cost equal to Rs. 60,000 And variable cost of Rs. 7.50 per unit. Find out (i) The number of units to be produced to break even; (ii) No. of units to be produced to earn a profit of Rs. 12,000; (iii) The profit, if 25,000 units are produced and sold.   (6)

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