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APR-MAY

B. E. (Eighth Semester) Examination, 2020

(Old Scheme)

(Mech., Mechatronics Engg. Branch)

PRODUCTION MANAGEMENT

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28.

Note : Part (a) of each question is compulsory.

Attempt any two parts from (b), (c) and (d).

Unit-I

1. (a) What is Production Management? 2
- (b) What are the functions of Production Management? 7

- (c) What are product design and development process? 7
 (d) What is calculation procedure of Break Even Point? 7

Unit-II

2. (a) Define sales forecasting. 2
 (b) What are seasonal variation? Why they are so important for sales forecasting? 7
 (c) Find the trend by least square method for data as follows :

Year	1975	1976	1977	1978	1979	1980	1981
Demand in (₹) 1,000	85	75	80	72	65	60	55

Also estimate the demand for 1984. 7

- (d) The sales of a news paper in first 7 months of 1998 are as follows :

Month	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.
Sales	44329	44670	48670	45784	47676	55730	54968

By using regression analysis techniques. 7

- (i) Establish the equation of straight line
 (ii) Calculate trend equation
 (iii) Project the forecast for the month of August, 1998

Unit-III

3. (a) Define material handling. 2
 (b) What are the factor to be considered to decide whether to "Make or Buy" a component? 7
 (c) Explain in brief the selection criteria for different type of material handling equipment. 7
 (d) 5 jobs are performed first on Machines M1 and then machine M2 time in hours taken by each job on each machine is given below :

Jobs	A	B	C	D	E
M1	5	1	9	3	10
M2	2	6	7	8	4

Determine the optimum sequence of job and minimum time elapsed. 7

Unit-IV

4. (a) What do you mean by Procurement? 2
 (b) What are function of stores discuss the advantages of good store keeping? 7
 (c) What is ABC analysis? Explain the steps involved in it. 7

- (d) A manufacturer purchases items in lots of 800 units which is a four month requirement. The cost per unit is ₹ 100 and the ordering cost is ₹ 120 per patch order. The inventory carrying cost is estimated as 20% of the average inventory estimate : 7
- (i) Determine the annual variable cost managing inventory 7
- (ii) How much saving can be obtained from EOQ purchases? 7

Unit-V

5. (a) What is Quality? 2
- (b) State and illustrate difference between Inspection and Quality Control. 7
- (c) What is acceptance sampling? Explain. 7
- (d) Write briefly on the construction of \bar{X} and \bar{R} charts. 7