

19 JUN 2023

Reg. No.

Question Paper Code

11921

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL/MAY 2023

Sixth Semester

Production Engineering

20PRPC601 - PRODUCTION PLANNING AND CONTROL

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

- | | <i>Marks,
K-Level, CO</i> |
|--|-------------------------------|
| 1. Define Production Planning and Control. | 2,K1,CO1 |
| 2. What is standardization? | 2,K1,CO1 |
| 3. What are the objectives of method study? | 2,K1,CO2 |
| 4. Define Work Study. | 2,K1,CO2 |
| 5. List the factors affecting the selection of batch size. | 2,K1,CO3 |
| 6. Define machine loading. | 2,K1,CO3 |
| 7. What are the functions of dispatching? | 2,K1,CO4 |
| 8. Define Master Production Schedule. | 2,K1,CO4 |
| 9. What are the objectives of JIT? | 2,K1,CO5 |
| 10. What is ERP? | 2,K1,CO5 |

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

- | | |
|--|-----------|
| 11. a) Briefly explain the types of production systems. | 13,K2,CO1 |
| OR | |
| b) Describe the Factors influencing product design. | 13,K2,CO1 |
| 12. a) Explain the steps involved in work study. | 13,K2,CO2 |
| OR | |
| b) Explain in detail about the steps in time study with suitable examples. | 13,K2,CO2 |
| 13. a) Explain the various steps involved in value analysis. | 13,K2,CO3 |
| OR | |
| b) Explain the steps in product planning with suitable examples. | 13,K2,CO3 |

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

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14. a) Explain the concept, inputs, characteristics, working, output and benefits of MRP. 13,K2,CO4

OR

- b) Explain in detail about expediting activities. 13,K2,CO4

15. a) What do you mean by ABC analysis? Explain about it in detail. 13,K2,CO5

OR

- b) Discuss the different costs associated with inventory. 13,K2,CO5

PART - C (1 × 15 = 15 Marks)

16. a) Five jobs are to be processed on three machines. The processing times in hours are given below. Determine the optimal sequence of jobs so that total elapsed time is minimized. 15,K3,CO6

Job	J1	J2	J3	J4	J5
A	5	7	6	9	5
B	2	1	4	5	3
C	3	7	5	6	7

OR

- b) The fixed costs for the year 2021-22 are Rs.3, 00,000, variable cost per unit is Rs.20. Each unit sells at Rs.80. Determine. 15,K3,CO6
- (1) BEP in terms of physical units and Rupees.
 - (2) If a sales volume of 5500 units has been expected, then what will the profit or loss earned?
 - (3) If a profit target of Rs.1,20,000 has been budgeted, compute the sales volume.
 - (4) If the Company sells 6500 units, calculate the margin of safety.