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Reg. No. :

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Question Paper Code: 59720

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2024

Elective

Mechanical Engineering

15UME920 - PRODUCTION PLANNING AND CONTROL

(Regulations 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

- _____ helps in establishing the interchangeability of products. CO1- U
(a) Standardization (b) Simplification
(c) Specialization (d) Diversification
- Job _____ helps in establishing the interchangeability of products CO1- U
(a) Standardization (b) Simplification (c) Diversification (d) Specialization
- Work Study Consists of _____. CO2- R
(a) Effective use of plant and equipment (b) Effective use of human effort
(c) Evaluation of human work (d) All of the above
- Delay occurs when CO2- R
(a) someone stops the process (b) product wait for next event (operation)
(c) both 'a' and 'b' (d) None of the above
- Choose the following, which is not a part of Five M's. CO3- U
(a) Material (b) Machine (c) Motion (d) Method
- Select the correct chart which is drawn by using Machine vs time. CO3- U
(a) Man machine chart (b) The load chart
(c) The progress chart (d) Curve chart

7. Gantt chart is mostly used for CO4- U
 (a) Routing (b) Scheduling
 (c) Follow up (d) Inspection and quality control
8. The bill of material does not consists of CO4- U
 (a) Part number (b) Specifications of part
 (c) Name of the part (d) Price of the part
9. Choose the following which is not an inventory. CO5- U
 (a) Machines (b) Raw material (c) Finished products (d) Consumable tools
10. The following classes of costs are usually involved in inventory decisions except CO5- U
 (a) Cost of ordering (b) Carrying cost
 (c) Cost of shortages (d) Machining cost

PART – B (5 x 2= 10 Marks)

11. Explain the objectives of production planning CO1- U
12. Distinguish between micro motion and macro motion study. CO2- U
13. State the objectives of line balancing. CO3- U
14. Explain priority sequencing. CO4- U
15. List the seven wastes to target of elimination in a JIT process. CO5- U

PART – C (5 x 16= 80 Marks)

16. (a) Explain about the following aspect CO1- App (16)
 (i) Marketing aspect
 (ii) Aesthetic aspect
 (iii) Operational Aspect
 (iv) Economic Aspect
- Or
- (b) The following are given for a car manufacturing company CO1- App (16)
 estimated output = 80,000 units, Fixed cost = Rs. 40,000,
 Variable cost = Rs. 10 per unit, selling price = Rs 20/units.
 Find out the break-even point analytically and graphically.
17. (a) Apply the tools and techniques used in the recording phase of method study in a fasteners manufacturing industry. CO2- App (16)

Or

- (b) Apply the various techniques of work measurement in the packaging unit of a bolt and nut manufacturing industry. CO2-App (16)
18. (a) Discuss the activities involved in process planning. CO3- App (16)
Or
(b) Discuss about the Machine Capacity along with its machine requirements. CO3- App (16)
19. (a) What are Gantt charts? Explain their types? How are they constructed? CO4- App (16)
Or
(b) What is priority sequencing? Explain any six priority rules used for job sequencing CO4- App (16)
20. (a) Classify the types of inventories and explain the about the purpose of holding stack. CO5- App (16)
Or
(b) State about ABC analysis. Explain its significance in the inventory control with a suitable example. CO5- App (16)

