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**Question Paper Code: U7208**

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

Professional Elective

Mechanical Engineering

**21MEV208 - PRODUCTION PLANNING AND CONTROL**

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

- Given selling price is Rs 10 per unit, variable cost is Rs.6 per unit and fixed cost is Rs 5,000. What is break-even point? CO1-U  
(a) 500 units      (b) 1,000 units      (c) 1,250 units      (d) None of the above
- Manufacture of products or assemblies using a continuous process is called. CO1- U  
(a) job production      (b) mass production  
(c) batch production      (d) process production
- Work study examines CO1-U  
(a) method      (b) duration of work  
(c) both (a) and (b)      (d) None of the above
- In process charts, the symbol used for storage is CO1-U  
(a) Circle      (b) Square      (c) Arrow      (d) Triangle
- Which of the following is not a part of Five M's? CO1-U  
(a) Material      (b) Machine      (c) Motion      (d) Method
- The price paid by the buyer is CO1-U  
(a) Cost value      (b) Use value      (c) Esteem value      (d) Exchange value
- Gantt chart is mostly used for CO1-U  
(a) Routing      (b) Scheduling  
(c) Follow up      (d) Inspection and quality control

8. The bill of material does not consists of CO1-U
- (a) Part number (b) Specifications of part
- (c) Name of the part (d) Price of the part

9. The cost of insurance and taxes are included in **CO1- U**
- (a) cost of ordering (b) set up cost
- (c) inventory carrying cost (d) cost of shortages

10. The time period between placing an order its receipt in stock is known as CO1-U
- (a) Lead time (b) Carrying time (c) On Carrying time (d) Over time

PART – B (5 x 2= 10 Marks)

11. State any four steps to improve margin of safety. CO1-U
12. Enumerate the recording techniques for method study. CO1-U
13. List the various allowances considered during time study. CO1-U
14. Brief about master Scheduling. CO1-U
15. Distinguish between MRP II and ERP. CO1-U

PART – C (5 x 16= 80 Marks)

16. (a) List the various functions of production planning and control and explain. CO1- U (16)
- Or
- (b) Explain about standardization, simplification and specialization. CO1- U (16)
17. (a) Construct a SIMO chart for a bolt, nut and washer assembly application. CO2- App (16)
- Or
- (b) Apply the Work sampling procedure for bolt nut manufacturing and list out its Limitations. CO2- App (16)
18. (a) What is value analysis? Describe the basic steps involved in the value analysis. CO1 -U (16)
- Or
- (b) Explain the steps involved in Process planning and list out the factors affecting Process planning. CO1 -U (16)

19. (a) Explain the process flow in Master Scheduling CO1- U (16)  
Or  
(b) What are the components of MRP CO1- U (16)
20. (a) Discuss the various basic elements of JIT that must be addressed CO2- App (16)  
for successful JIT implementation.  
OR  
(b) Explain the Costs associated with inventories system. CO2- App (16)

