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**Question Paper Code: 49718**

B.E./B.Tech. DEGREE EXAMINATION, NOV 2018

Elective

Mechanical Engineering

14UME918-- PRODUCTION PLANNING AND CONTROL

(Regulation 2014)

Duration: Three hours

Maximum: 100 Marks

PART A - (10 x 1 = 10 Marks)

(Answer all Questions)

1. The correct sequence of operation in production planning and control is CO1- R
  - (a) Routing-Scheduling-Dispatching-Follow up
  - (b) Scheduling-Routing-Dispatching-Follow up
  - (c) Dispatching-Routing-Scheduling-Follow up
  - (d) Routing-Scheduling-Follow up-Dispatching
  
2. Mass production is characterized by CO1- R
  - (a) Low volume high variety
  - (b) High volume low variety
  - (c) High volume low variety
  - (d) Low volume low variety
  
3. Work study examines CO2- R
  - (a) Method
  - (b) Duration of work
  - (c) Both (a) and(b)
  - (d) None of the above
  
4. 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
  
5. Value analysis examines the CO3- R
  - (a) Design of every components
  - (b) Method of manufacturing
  - (c) Material used
  - (d) All of the above

6. The cost reduction technique in comparison to the worth of a product is known as CO3- R
- (a) Reverse engineering (b) Value engineering  
(c) Material engineering (d) Quality engineering
7. Gantt Chart is mostly used for CO4- R
- (a) Routing (b) Scheduling  
(c) Follow up (d) Inspection and quality control
8. The bill of material does not consists of CO4- R
- (a) Part number (b) Specifications of part  
(c) Name of the part (d) Price of the part
9. Which of the following is true for Inventory control? CO5- R
- (a) Economic order quantity has minimum total cost per order  
(b) Inventory carrying costs increases with quantity per order  
(c) Ordering cost decreases with lo size  
(d) All of the above
10. The cost of insurance and taxes are included in CO5- R
- (a) Cost of ordering    (b) Set up cost    (c) Inventory carrying cost    (d) Cost of shortages

PART – B (5 x 2= 10Marks)

11. What is Break-Even Analysis? CO1- R
12. Define method study. CO2- R
13. Define the term Product Planning. CO3- R
14. What is MPS? CO4- R
15. When do you use ABC analysis? CO5- R

PART – C (5 x 16= 80Marks)

16. (a) Write short notes on CO1-App (16)
- (i) Routing
  - (ii) Loading
  - (iii) Scheduling
  - (iv) Dispatching
  - (v) Expediting
- Or
- (b) Explain different types of production systems. Differentiate between them. CO1-App (16)
17. (a) Briefly explain the various techniques of work measurement CO2-App (16)
- Or
- (b) Write a short notes on the following work measurement techniques CO2-Ana (16)
- (i) Work sampling
  - (ii) Synthetic data and
  - (iii) PMTS
18. (a) Explain the importance of process planning with reference to production control. Discuss the activities involved in process planning. CO3- Ana (16)
- Or
- (b) Explain the various phases of value engineering. CO3- Ana (16)
19. (a) Explain how Johnson's rule can be used for scheduling n jobs on three machines CO4- U (16)
- Or
- (b) Discuss the concept, inputs, characteristics, working, outputs, and benefits of Material Requirements Planning (MRP). CO4- Ana (16)
20. (a) Explain the methodology adopted in implementing ERP. CO-5 U (16)
- Or
- (b) Discuss the various basic elements of JIT that must be addressed for successful JIT implementation. CO-5 U (16)

