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**Reg. No. :**

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**Question Paper Code: 59720**

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

Elective

Mechanical Engineering

15UME920 - PRODUCTION PLANNING AND CONTROL

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 1 = 10 Marks)

1. The correct sequence of operations 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. Job evaluation is the method-of determining the CO1- R
  - (a) Relative worth of jobs
  - (b) Skills required by a worker
  - (c) Contribution of a worker
  - (d) Contribution of a job
  
3. Work study is concerned with CO2- R
  - (a) Improving present method and finding standard time
  - (b) Motivation of workers
  - (c) Improving production planning and control
  - (d) Improving production capability
  
4. Micro motion study is CO2- R
  - (a) Enlarged view of motion study
  - (b) Analysis of one stage of motion study
  - (c) Minute and detailed motion study
  - (d) Subdivision of an operation into therbligs and their analysis

5. Weaknesses of PPC department can be studied on following grounds :- CO3- R
- (a) Addition of orders (b) Failures in delivery commitment  
(c) Cancellation of orders (d) Complaints from customers
6. Routing assists engineers in deciding in advance CO3- R
- (a) The flow of material in the plant  
(b) The methods of proper utilization of manpower  
(c) The methods of proper utilization of machines  
(d) The methods of proper utilization of machines
7. Scheduling gives information about CO4- R
- (a) When work should start and how much work should be completed during a certain period  
(b) When work should complete  
(c) That how idle time can be minimized  
(d) Proper utilization of machines
8. Gantt chart provides information about the CO4- R
- (a) Material handling (b) Proper utilization of manpower  
(c) Production schedule (d) Efficient working of machine
9. Inventory management consists of CO5- R
- (a) Effective running of stores  
(b) Stock control system  
(c) State of merchandise methods of storing and maintenance etc  
(d) All of the above
10. In ABC analysis, the classification is based on :- CO5- R
- (a) Carrying cost (b) Cumulative cost (c) Ordering cost (d) Raw material cost

PART – B (5 x 2= 10 Marks)

11. Reproduce the objectives of Production Planning and control. CO1- R
12. Is idle time affects productivity? Justify the reason. CO2- R
13. Interpret the parameters affecting the selection of batch size. CO3- R

14. State the advantages of MRP systems. CO4- R
15. Differentiate Independent and Dependent demand. CO5- R

PART – C (5 x 16= 80 Marks)

16. (a) (i) Interpret the relationship between production planning and production control with neat block diagrams. CO1- U (8)
- (ii) Elucidate the function of production planning and control with help of neat sketch. CO1- U (8)
- Or
- (b) (i) Exemplify the job shop and batch production systems. CO1- U (8)
- (ii) Discuss in brief: Economics of a new design for a product. CO1- U (8)
17. (a) (i) Explain “how Ergonomics affects the productivity”. CO2- U (8)
- (ii) Illustrate the various charts used in motion studies. CO2- U (8)
- Or
- (b) Elucidate the basic requirements of work sampling and also mention its characteristic and applications. CO2- U (16)
18. (a) Summarize the pre-requisite information needed for process planning with the steps involved in process planning. CO3- U (16)
- Or
- (b) Explain the importance of process planning with reference to production control. Discuss the activities involved in process planning. CO3- U (16)
19. (a) Explain the role of Gantt charts in production scheduling. Elaborate the different types of Gantt charts used. CO4- U (16)
- Or
- (b) Discuss the concept, input characteristics, working, out put and benefits of MRP? CO4- U (16)
20. (a) Summarize fixed -period quantity inventory model? Also compare and contrast P-system with Q-system. CO5- U (16)
- Or
- (b) Explain ABC analysis? Explain its significance in the inventory control with suitable example. CO5- U (16)

