



**KINGS**  
COLLEGE OF ENGINEERING



**DEPARTMENT OF MECHANICAL ENGINEERING**

**Question Bank**

**Sub. Code/Name: ME1009 – PRODUCTION PLANNING AND CONTROL**

**Year/Sem: IV/VIII**

**Unit-I (Introduction)**

**Part-A (Two marks)**

1. Define production planning and control.
2. List the objectives of PPC.
3. What are the phases of production planning and control?
4. List various functions of PPC.
5. What is production system?
6. List the types of production system
7. What are the objectives of product analysis?
8. List the various factors that influence the product design.
9. What is meant by standardization?
10. What is meant by simplification?

**Part-B (16 marks)**

1. What do you understand by production planning and control? Discuss its main elements. (16)
2. Enumerates the activities involved in the production planning and control function under the Convenient points. (16)
3. Explain different types of production systems. Differentiate between them. (16)
4. Explain the functional and operational aspects of product design. (16)
5. Explain in detail the production aspects of product design. (16)

**Unit –II (Work study)**

**Part-A (Two marks)**

1. What is meant by work study?
2. List the objectives of work study?
3. Define method study?
4. List the objectives of method study.
5. What is a Process chart?
6. List the types of process chart.

7. What is flow diagram?
8. What is meant by work measurement?
9. What is meant by work sampling?

**Part-B (16 marks)**

1. Explain briefly the various steps involved in conducting the work study. (16)
2. State and explain in brief the steps involved in conducting the method study procedure. (16)
3. Briefly explain the various techniques of work measurement. (16)
4. Define time study. List down the various steps in conducting a stopwatch time study. (16)
5. Explain the following terms:
  - a) Work sampling (6)
  - b) Synthetic data (6)
  - c) PMTS (4)

**Unit-III (Product planning and process planning)**

**Part-A (Two marks)**

1. What are steps involved in a product planning process?
2. Define value analysis.
3. List the types of economic value.
4. Define Process planning.
5. What are the different steps or specific activities involved in process planning?
6. Write the general approaches to process planning.
7. What is machine loading?
8. What is balancing?
9. What are the factors affecting process planning?
10. What are steps involved in the value analysis?

**PART-B (16 marks)**

1. What is value analysis? Describe the basic steps involved in the value analysis. (16)
2. Explain the importance of process planning with reference to production control. Discuss the activities in process planning (16)
3. Compare and contrast the manual process planning with CAPP. (16)
4. What is meant by machine loading? Also enumerate the various methods to the cycle time to a minimum. (16)
5. What do you mean by machine balancing? Also explain the effect of balancing on number of machines required with an illustration. (16)
6. Write short notes on analysis of process capacities in a multiproduct system. (16)

**Unit-IV (Production scheduling)**  
**Part-A (Two marks)**

1. What is Scheduling?
2. List out types of scheduling techniques.
3. Define master scheduling.
4. What are basic scheduling problems?
5. Define Line of balance.
6. Write out various charts used in LOB.
7. Define Material requirements planning.
8. Define dispatching.
9. Define Expediting.
10. Define Priority sequencing.

**Part-B (16 marks)**

1. Explain the procedure by which scheduling 2 jobs in m machines can be done with suitable example (16)
2. Write short notes on:
  - a) Aggregate run-out method of batch scheduling. (8)
  - b) Line of balance method (8)
3. Discuss the concepts, inputs, characteristics, working, outputs, and benefits of MRP. (16)
4. What are the functions of dispatching? Explain the various documents raised (16)
5. What is progressing? Explain its function? Also write short notes on 'recording progresses'. (16)

**Unit –V (Inventory control and Recent trends in PPC)**  
**Part-A (Two marks)**

1. Define Inventory control.
2. What are the types of inventory?
3. What are the main cost associated with inventory?
4. What are the types of inventory system?
5. What is meant by selective inventory control?
6. What is JIT?
7. List out any six selective inventory control techniques.
8. What is ERP?
9. What is MRP II?
10. Differentiate between pull system and push system.

**Part-B (16 marks)**

1. What do you understand by inventory control? Explain the purpose of maintaining inventory in any production unit. (16)
2. What is EOQ? Derive the expression for EOQ when the demand of the item is uniform, the production rate is infinite and no stock-outs are allowed. (16)
3. a) Explain the terms: lead time, stock out, buffer stock, inventory carrying cost. (8)  
b) Distinguish between in-process inventory, safety stock inventory and seasonal inventory (8)
4. Describe the fixed period quantity inventory model? Also compare and contrast P-system with Q- System. (16)
5. What is selective control of inventory and explain various selective control techniques.(16)
6. What is ABC analysis? Explain its significance in the inventory control with suitable example. (16)