



## BRAINWARE UNIVERSITY

**Term End Examination 2023-2024**  
**Programme – MBA-2022/MBA-2023**  
**Course Name – Production and Operations Management**  
**Course Code - MBA203**  
**( Semester II )**

**Full Marks : 60**

**Time : 2:30 Hours**

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

### **Group-A**

(Multiple Choice Type Question)

**1 x 15=15**

1. *Choose the correct alternative from the following :*

- (i) Identify the primary objective of a production system.
- |                        |                                  |
|------------------------|----------------------------------|
| a) Minimise efficiency | b) Maximise costs                |
| c) Maximise revenue    | d) Optimize resource utilization |
- (ii) Identify the term that best describes the process of converting inputs into desired outputs within a business organization.
- |                |                       |
|----------------|-----------------------|
| a) Operation   | b) Quality Management |
| c) Warehousing | d) Logistics          |
- (iii) Identify the primary duties and responsibilities of a production manager.
- |   |                                   |
|---|-----------------------------------|
| a) Planning, organizing, and controlling production processes | b) Marketing and sales management |
| c) Financial analysis   | d) Human resources management     |
- (iv) Select the type of layout used in industries with high customization with low-volume and high-variety production.
- |                    |                          |
|--------------------|--------------------------|
| a) Cellular layout | b) Product layout        |
| c) Process layout  | d) Fixed-position layout |
- (v) Identify the maintenance strategy that focuses on scheduled inspections and repairs to prevent equipment failures.
- |                           |                           |
|---------------------------|---------------------------|
| a) Reactive maintenance   | b) Corrective maintenance |
| c) Preventive maintenance | d) Predictive maintenance |
- (vi) Select the type of maintenance that aims to maintain equipment and facilities in optimal condition to prevent breakdowns.
- |                          |                           |
|--------------------------|---------------------------|
| a) Breakdown maintenance | b) Preventive maintenance |
|--------------------------|---------------------------|

- c) Corrective maintenance  
d) Reactive maintenance
- (vii) Identify from the following which is not a key process in material handling.  
a) Conveying  
b) Selling  
c) Sorting  
d) Assembly
- (viii) Identify the key advantage of effective material management.  
a) Reduced costs  
b) Increased delays  
c) Higher inventory  
d) Decreased efficiency
- (ix) Select the primary use of budgeting in production management.  
a) Employee motivation  
b) Quality assurance  
c) Customer satisfaction  
d) Resource Allocation
- (x) Select the classification technique that categorizes items based on value and criticality.  
a) ABC analysis  
b) VED analysis  
c) XYZ analysis  
d) FSN analysis
- (xi) Explain the process by which inventory control impact production operations.  
a) Rises costs  
b) Increases lead time  
c) Decreases efficiency  
d) Reduces stockouts
- (xii) Explain "lead time" in the context of inventory management.  
a) Time taken to place an order  
b) Time taken for inventory to expire  
c) Time taken for production from inventory  
d) Time taken for an order to arrive
- (xiii) Choose from the following explains the concept of asset utilization in maintenance.  
a) Maximizing the value of inventory assets  
b) Maximizing the efficiency of equipment  
c) Minimizing the downtime of assets  
d) Optimizing storage space for inventory
- (xiv) Justify the significance of "reorder point" in inventory management.  
a) The point at which inventory is reordered  
b) The point at which inventory is received  
c) The point at which inventory is disposed  
d) The point at which inventory is sold
- (xv) Explain the meaning of queuing theory in capacity planning.  
a) Technique for scheduling production activities  
b) Method for managing waiting times  
c) Strategy for optimizing inventory levels  
d) Approach for designing facility layouts

### Group-B

(Short Answer Type Questions)

3 x 5=15

2. Analyze the challenges and benefits associated with implementing a Just-in-Time (JIT) manufacturing system in a production environment. (3)
3. Explain economic order quantity (EOQ). (3)
4. There are 7 activities A,B,C,D,E,F and G. A and B start simultaneously at the beginning. C and D will start after A. E will start after B and F will start after C. G can start only when D and E are completed. Draw a network diagram using AoA method. (3)
5. Summarize the stages involved in the manufacturing process, listing at least three key steps and briefly explaining each one. (3)
6. Consider two paths of a project network diagram. The first one consists of activities A, B, D and F. The second path consists of activities A, C, E and F. The times required for activities A,B,C,D,E and F are 5,4,7,8,9,4 days respectively. Evaluate the duration for the critical path.. (3)

OR

- Explain the significance of resource leveling in project management and its impact on project outcomes. (3)

**Group-C**  
(Long Answer Type Questions)

5 x 6=30

7. Analyse the advantages and disadvantages of product layout and process layout of a production system. (5)
8. Explain the importance of safety stock for keeping things running smoothly in a supply chain. (5)
9. Analyze the role of Statistical Quality Control (SQC) in achieving Six Sigma quality levels. (5)
10. Explain the need for total quality management (TQM) in organizations. (5)
11. Evaluate the effectiveness of various material handling procedures in the production system. (5)
12. Explain different levels of decisions taken in a production unit. (5)

**OR**

Evaluate the effectiveness of control charts in quality management. (5)

\*\*\*\*\*