18119

BRAINWARE UNIVERSITY

Term End Examination 2025-2026
Programme – BBA-Hons-2023/BBA-Hons-2024/BBA(BA)-Hons-2024
Course Name – Production and Operations Management
Course Code - BBA30108/BBA30105/BBB30104
(Semester III)

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) What is a key characteristic of a continuous process in manufacturing?
- a) The process involves distinct, separate batches of production with a clear start and end for each batch.
- b) The process operates with a constant flow of materials through the production system without interruption.
- c) The process requires frequent setup and changeovers between different products.
- d) The process allows for significant variations in production speed and output quality.

(ii) Which of the following is an example of a project?
- a) Routine maintenance of manufacturing equipment
- b) Daily operations in a retail store
- c) Developing a new software application with a specific deadline and defined objectives
- d) Ongoing inventory management and supply chain logistics

(iii) Which process operates without interruption, handling large volumes?
- a) Batch process
- b) Continuous process
- c) Job shop process
- d) One-off production

(iv) What is the primary characteristic of a fixed-position layout?
- a) The product moves through different stations
- b) The product remains stationary and workers move around it
- c) The product is continuously flowing
- d) Machines are arranged by product type

(v) Which layout type is typically used in mass production systems?
- a) Process layout
- b) Product layout
- c) Fixed-position layout
- d) Hybrid layout

(vi) Which type of layout is best suited for customized production?
- a) Product layout
- b) Process layout
- c) Fixed-position layout
- d) Continuous layout

(vii) Describe how Total Quality Management (TQM) focuses on continuous improvement.

a) By involving all employees in quality control efforts
b) By only involving managers in decisions
c) By making quick and temporary fixes
d) By outsourcing production to reduce costs

(viii) Clarify the role of quality control in manufacturing.

a) It checks product defects during production
b) It reduces total production time
c) It increases marketing effectiveness
d) It lowers employee wages

(ix) Illustrate how regular quality audits help in maintaining consistent product standards.

a) By identifying process errors and areas for improvement
b) By reducing the number of audits performed
c) By focusing on customer complaints alone
d) By cutting down on manufacturing costs

(x) Distinguish between internal quality checks and external quality certification.

a) Internal checks are done by the company, certifications are by third-party
b) Both are done by employees only
c) Certifications are done only for customer preference
d) Internal checks focus only on cost reduction

(xi) Apply Just-in-Time (JIT) to a business that wants to reduce storage costs.

a) Order materials only when needed
b) Store extra materials for the future
c) Order materials in bulk
d) Increase the size of the warehouse

(xii) How would you use EOQ (Economic Order Quantity) to determine how much inventory to order?

a) Calculate the optimal order quantity
b) Order as much as you can afford
c) Use last year's order quantity
d) Order based on customer feedback

(xiii) Show how routing can be applied to improve production efficiency.

a) Set a clear sequence of steps for materials to follow
b) Hire more employees
c) Increase the production time
d) Reduce the number of operations

(xiv) Use ABC analysis to categorize inventory items in a retail store.

a) Classify items into A, B, and C based on importance
b) Group items randomly
c) Use only one category for all items
d) Remove items from the analysis

(xv) Apply vendor rating to select the best supplier for a manufacturing company.

a) Evaluate suppliers based on quality, price, and reliability
b) Choose suppliers based on personal preferences
c) Select the most expensive supplier
d) Use the supplier closest to your company

Group-B

(Short Answer Type Questions) 3 x 5=15

2. Explain the main characteristics of a continuous production process and provide an example of an industry that uses this method. (3)

3. Q: Describe how continuous processes differ from batch processes in terms of flexibility and production volume. (3)

4. What are the factors that influence the decision to use a batch production process in a manufacturing environment. (3)

5. What is the Economic Order Quantity (EOQ) model in inventory management? (3)

6. Analyze and evaluate the impact of Just-In-Time (JIT) inventory management on a production process by identifying and describing two key benefits of its implementation. How do these benefits contribute to overall operational efficiency and cost reduction? (3)

OR

Analyze the influence of Just-In-Time (JIT) practices on Japanese Supply Chain Management and how it contributes to minimizing waste and reducing costs. (3)

Group-C
(Long Answer Type Questions) 5 x 6=30

7. Describe the difference between continuous and intermittent processes in production. (5)
8. Define the types of production systems: job, batch, and mass production, with examples. (5)
9. **Question:** (5)

   As a manufacturer of medical scanning equipment (CT and MRI machines), outline the steps you would take to innovate for better customer experience, focusing on:

   - Understanding customer needs through market research.
   - Approaching Research and Development (R&D) effectively.
   - Implementing a continuous feedback loop for improvement.

10. **Question:** (5)

    As a clothing brand, outline the steps you would take to innovate for a better customer experience, focusing on:

    - Gathering customer insights through market trends analysis.
    - Leveraging R&D for sustainable materials and designs.
    - Creating a feedback system for ongoing style and fit improvements.

11. A logistics company is planning to establish a new warehouse to optimize its delivery routes. The company has identified the following customer locations and their corresponding weights: (5)

    - **Location D:** Coordinates (3, 4), Weight: 40
    - **Location E:** Coordinates (6, 7), Weight: 60
    - **Location F:** Coordinates (8, 2), Weight: 20

    Using the Center of Gravity (COG) method, calculate the optimal coordinates (X, Y) for the new warehouse.

12. Explain the concept of Location Factor Rating. How does this technique assist in making facility location decisions? (5)

OR

Explain the Center of Gravity (COG) method in the context of facility location analysis. What is its primary objective? (5)

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