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Brainware University  
398, Ramkrishnapur Road, Barasat  
Kolkata, West Bengal-700123

## BRAINWARE UNIVERSITY

Term End Examination 2024-2025

Programme – Dip.ME-2022

Course Name – Industrial Engineering & Management

Course Code - DMEPC503

( Semester V )

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) Select the primary objective of a good plant layout.
  - a) Maximize production costs
  - b) Increase labor intensity
  - c) Minimize material handling
  - d) Complicate the workflow
- (ii) Identify the layout which is suitable for mass production.
  - a) Process layout
  - b) Product layout
  - c) Fixed position layout
  - d) Hybrid layout
- (iii) Select the principle of effective plant layout.
  - a) Increased idle time
  - b) Maximizing material handling
  - c) Minimizing delays in production
  - d) None of the above
- (iv) Select the important factor in ergonomic plant layout design.
  - a) Reducing worker fatigue
  - b) Increasing machine downtime
  - c) Maximizing idle time
  - d) Minimizing automation
- (v) The term 'Cycle Time' is defined as
  - a) The total time taken to produce a batch of products
  - b) The time between the start and completion of a process
  - c) The time taken by a machine to complete a task
  - d) The time taken for machine setup
- (vi) The basic motion elements used in motion study are defined as
  - a) Elements
  - b) Therbligs
  - c) Nodes
  - d) Units
- (vii) The term 'Fatigue Allowance' relates with
  - a) Time added for rest and recovery
  - b) Time taken for lunch breaks



9. Analyze the role of work study in lean manufacturing. (5)
10. Describe the various plant layouts and their impact on the efficiency of operations. Provide examples. (5)
11. Illustrate the ethical considerations in management. (5)
12. Analyze the various scheduling techniques used in PPC and their impact on production efficiency. (5)

OR

Explain the concept of Just-in-Time (JIT) production and its impact on production planning and control. (5)

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