



Library
Breinware University
398, Ramkrishnapur Road, Barasat
Kolkata, West Bengal-700125

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

- 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
- 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

c) Time taken for personal needs (viii) Identify the correct statement for flow shop produced.	d) Time spent in machine setup duction.	,
a) Products are made to orderc) Products are produced in small batches(ix) Identify the correct option which is not a part of	 b) Products are produced in a continuou d) Products are produced in large job lot production control process. 	
a) Schedulingc) Marketing(x) Identify the primary focus of industrial engineer	b) Routing d) Dispatching ing.	
a) Financial managementc) Optimization of systems and processes(xi) Identify the element of management process.	b) Human resources management d) Marketing strategies	
a) Planningc) Organizing(xii) Select the correct statement.	b) Controlling d) All of the above	
a) Internal rate of return (IRR) indicate the time taken to recover the initial investment	 b) Internal rate of return (IRR) indicate the interest rate at which the net present of a project is zero 	
 c) Internal rate of return (IRR) indicate the maximum possible profit from a project (xiii) Select the source of long term financing. 	d) Internal rate of return (IRR) indicate the annual percentage yield on an investr	
a) Commercial paperc) Bank loans(xiv) Select the primary purpose of financial statement	b) Trade credit d) Bonds nts.	
a) Comply with legal requirements	b) Provide information to investors and creditors	
c) Assist in budgeting(xv) Identify the correct option that is not a part of f	d) Determine tax liabilities inancial management.	
a) Maximizing the wealth of shareholdersc) Increasing sales revenue	b) Ensuring the firm's survival d) Managing financial risks	
Group-B (Short Answer Type Questions) 3 x 5=1		3 x 5=15
 Explain the contribution of work study to productivity improvement. Describe the concept of 'standard time' in work measurement. Explain the role of inventory control in production planning. Explain the purpose of fire safety equipment in a plant. Explain the significance of personal protective equipment (PPE). OR Illustrate the 'flow process chart' in method study. 		(3) (3) (3) (3) (3)
Group-C		
		5 x 6=30
7. Explain the process of financial planning and its importance in achieving long-term financial (5)		

- stability.
- 8. Describe the process of material requirements planning (MRP) and its role in ensuring timely (5) availability of materials for production.

Library Brainware University 398, Ramkrishnapur Road, Baras Kolkala, West Bengal-700125

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.
11. Illustrate the ethical considerations in management. (5)
12. Analyze the various scheduling techniques used in PPC and their impact on production efficiency.

OR

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