



# BRAINWARE UNIVERSITY

Term End Examination 2023

Programme – Dip.ME-2019

Course Name – Industrial Engineering

Course Code - DME601

( Semester VI )

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 most suitable incentive plan for the maintenance section of an industry.
- |                         |                         |
|-------------------------|-------------------------|
| a) piece rate system    | b) group incentive plan |
| c) profit sharing plans | d) simplification       |
- (ii) Actual performance of a task is called
- |               |                  |
|---------------|------------------|
| a) an event   | b) an activity   |
| c) a duration | d) none of these |
- (iii) Production cost refers to prime cost plus \_\_\_\_\_.
- |  |  |
|--|--|
| a) factory overheads                           | b) factory and administration overheads                |
| c) factory, administration and sales overheads | d) factory, administration, sales overheads and profit |
- (iv) Fixed position layout is also known as \_\_\_\_\_.
- |                          |                     |
|--------------------------|---------------------|
| a) analytical layout     | b) synthetic layout |
| c) static product layout | d) none of these    |
- (v) Identify the type of organisation preferred for a steel industry.
- |                                |  |
|--------------------------------|--|
| a) line organisation           | b) functional organisation                 |
| c) line and staff organisation | d) line, staff and functional organisation |
- (vi) Choose a diagram showing the path followed by men and materials while performing a task.
- |                   |                       |
|-------------------|-----------------------|
| a) string diagram | b) flow process chart |
| c) travel chart   | d) flow diagram       |
- (vii) The determination of standard time in a complex job system is best done through \_\_\_\_\_.
- |                              |                                     |
|------------------------------|-------------------------------------|
| a) stop watch time study     | b) analysis of micromotions         |
| c) grouping timing technique | d) analysis of standard data system |
- (viii) Finance must keep investment and costs low. This can be done by \_\_\_\_\_

- a) Increasing inventory so inventory investment is at a maximum  
 b) Decreasing the number of plants and warehouses  
 c) Producing small quantities  
 d) Using short production runs
- (ix) In break even analysis, total cost consists of \_\_\_\_\_.
- a) fixed cost + sales revenue  
 b) variable cost + sales revenue  
 c) fixed cost + variable cost  
 d) fixed cost + variable cost + profit
- (x) Micromotion study Determines the \_\_\_\_\_
- a) analysis of one stage of motion chart  
 b) motion study, when seen on a time chart  
 c) subdivision of an operation into therbligs and their analysis  
 d) enlarged view of motion study
- (xi) Valve analysis is particularly of interest
- a) jobbing work economics are involved  
 b) production is on large scale  
 c) only few components are involved  
 d) costly equipment is used
- (xii) Choose the correct type of layout used for manufacturing steam turbines.
- a) product layout  
 b) process layout  
 c) fixed position layout  
 d) any one of these
- (xiii) Service time in queuing theory is usually assumed to follow \_\_\_\_\_
- a) normal distribution  
 b) Poissons distribution  
 c) Erlang distribution  
 d) exponential law
- (xiv) At the break even point \_\_\_\_\_
- a) total cost is more than the sales revenue  
 b) total cost is less than the sales revenue  
 c) total cost is equal to sales revenue  
 d) fixed cost is equal to variable cost
- (xv) For handling materials during manufacture of cement, a \_\_\_\_\_ is widely used.
- a) belt conveyor  
 b) bucket conveyor  
 c) fork lift truck  
 d) overhead crane

**Group-B**

(Short Answer Type Questions)

3 x 5=15

2. Explain the application in scheduling. (3)  
 3. Explain the Queuing system. (3)  
 4. Explain the types of Queuing system. (3)  
 5. Discuss the benefits of FMS system. (3)  
 6. Explain tolls and techniques of inventory control. (3)

**OR**

Explain concept of Process Mapping. (3)

**Group-C**

(Long Answer Type Questions)

5 x 6=30

7. Discuss machine tool applications of NC system. (5)  
 8. Explain supplier development. (5)  
 9. Differentiate between production planning and production control. (5)  
 10. Write short notes on Allowances. (5)  
 11. Explain the term project management. (5)  
 12. Explain the drivers of supply chain performance. (5)

**OR**

Explain supply chain network. (5)

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