



BRAINWARE UNIVERSITY

Term End Examination 2023

Programme – BBA-2018

Course Name – Production & Operations Management

Course Code - BBA304

(Semester III)

Full Marks : 70

Time : 3:0 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 which of the following functions is not a core function of an organization
- a) The accounting and finance function b) The marketing (including sale) function
c) The operation function d) The product or service development function
- (ii) Most operation produce a mixture of both products and services which of the following business is closest to producing 'pure' services? Select the correct option.
- a) IT company b) Counselor /therapist
c) Steel company d) A restaurant
- (iii) Identify which of the following activities is not a direct responsibility of operations management.
- a) Developing an operations strategy for the operation b) Planning & controlling the operations
c) Determining the exact mix of products and services. d) Designing the operations products , services & process
- (iv) Identify which of the following would not be normally considered as a key feature of operations management?
- a) Most new technology is implemented b) World class operations can give an organization competitive advantage
c) Operations researches mathematical techniques for optimizing process d) Operations is the part of an organization which creates wealth through the management of the transformation process
- (v) Identify which of the following is the least likely decision to be made by operations managers.
- a) Selecting the locations and layout of a facility b) Designing and improving the jobs of the workspace

- c) How to use quality techniques to reduce waste
- (vi) What type of process would a paper mill be most likely to use? Select the correct option.
- a) Continuous flow
c) Job shop
- b) Project
d) Flow shop
- (vii) What priority rule is being used when jobs are processed according to the lowest ratio of due date to remaining processing time? Select the correct option.
- a) CR (critical ratio)
c) FCFS (first come, first served)
- b) EDD (earliest due date first)
d) S/O (least slack per operation first)
- (viii) Identify which of the following statements is true of Lean-Six Sigma.
- a) Lean principles focus on advanced statistical methods.
c) Lean principles have been developed over a lengthy period of time.
- b) Lean principles and Six-Sigma are separate bodies of knowledge
d) Lean principles include the 5Ss framework and practices.
- (ix) _____ ensures that manufacturing concerns are systematically incorporated into the design process. Select the correct option.
- a) Design for manufacture
c) Design for robustness
- b) Modular design
d) Quality function deployment
- (x) The objective of failure mode and effects analysis is to _____. Select the correct option.
- a) Anticipate product failures and prevent them from occurring
c) Describe the interrelationships among product failures
- b) Devise ways of minimizing the impacts of product failures when they occur
d) Quantify the likelihoods of different product failures
- (xi) Which of the following processes usually involves a large investment of funds and resources, and produces one item at a time to customer order? Choose the correct option.
- a) Project
c) Mass
- b) Continuous
d) None of these
- (xii) A driverless truck that follows a path of rails or wires embedded in the floor is called _____. Choose the correct option.
- a) an ATC
c) an AGV
- b) a FMS
d) All of these
- (xiii) Very high volume commodity products are best suited to _____. Choose the correct option.
- a) Projects.
c) Mass production
- b) Batch production.
d) Continuous processes
- (xiv) Locating all the drills in one work center lathes in another work center and milling machines in yet another work center represents what type of layout? Choose the correct option.
- a) Fixed-position layout
c) Process layout
- b) Product layout
d) None of these
- (xv) An assembly line consists of 5 tasks with times of 12, 9, 8, 7, and 11 minutes. The cycle time for the line is 25 minutes. The theoretical minimum number of workstations for this situation is _____. Choose the correct option.
- a) 1
c) 3
- b) 2
d) 4

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Explain the benefits of a good layout in a workplace. (3)
3. Describe the primary responsibilities of Operations Management. (3)
4. Discuss operation scheduling in the context of operations management. (3)
5. Explain the concept of Johnson's rule used in scheduling. (3)
6. Analyze in aggregate planning, how are demand, workforce, and average inventory balanced. (3)

OR

Explain briefly the concept of control charts in the context of statistical quality control. (3)

Group-C

(Long Answer Type Questions)

5 x 8=40

7. Differentiate Manufacturing and Service Operations. (5)
8. Illustrate the characteristics of Manufacturing Systems. (5)
9. Plant location determination is the most important activities in production management-explain. (5)
10. Illustrate the advantages of plant layout. (5)
11. Explain preventive maintenance (5)
12. Describe VED analysis. (5)
13. calculate Reorder Quantity (5)

Minimum Stock Level	5,000 units
Average Stock Level	10,000 units
Consumption	Minimum 2,000 units per month
	Maximum 4,000 units per month
Delivery Period	Minimum 3 months
	Maximum 6 months

14. The information is available related to a type of material. Calculate EOQ. Assume carrying cost as Rs 0.40 per order (round off to nearest next whole no.) (5)

Annual Demand	6,000 units
Unit price	Rs 3.00
Ordering Cost per Order	Rs 10.00
Storage Cost	2% p.a.
Interest Rate	10% per annum
Lead Time	Half Month

OR

(5)

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Categorize A, B and C items when, 'A' items a/c around 80%, 'B' for 10% and 'C' for around 5% of consumption value.

Items	Monthly Consumption (units)	Price per Item (Rs.)
I	3000	5
II	500	250
III	2000	2
IV	3000	1
V	1500	10

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