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[20-HRGPNW–D3S(N)21A]

BBA 3rd Semester (New) Exam., 2020 (W)

PRODUCTION AND OPERATION MANAGEMENT

[GBA S3–02]

Full Marks : 80

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. *(a)* Answer the following questions in 1 or 2 sentence(s) : 1×8=8

(i) Define production management.

(ii) Define product layout.

(iii) Define process layout.

(iv) State one advantage of specialization.

(v) State one disadvantage of specialization.

(vi) Define work sampling.

(vii) What is safety stock?

(viii) What is actual capacity?

(b) Choose the correct option : 1×4=4

(i) For a large batch size of a highly standardized product, the preferred process design is

1. product-based dedicated system
2. cellular manufacturing
3. process focussed job shop
4. None of the above

(ii) For a small-scale fabrication factory, producing small volume of various designs of grill panels, the preferred plant layout is

1. job shop production
2. batch production
3. mass production
4. None of the above

(iii) Multi-tasking means

1. training workers in different jobs or workstations
2. similar tasks are added to the present job of the worker
3. the worker is involved in planning, organizing and quality inspection of his own work
4. None of the above

(iv) A product may be called a new product if it is

1. entirely new to the world
2. new to an existing marketplace
3. new to the company
4. All of the above

(c) Fill in the blanks : 1×4=4

(i) Continuous production process is suitable for standard products that require _____ production.

(ii) Work study is a _____ method study and work measurement.

(iii) _____ repositioning is also a category of new product.

(iv) The probability that a product provides uninterrupted services under normal operating conditions is a measure of its _____.

2. Answer any *five* of the following questions (each in around *50* words) : 2×5=10

(a) State two advantages of mass production.

(b) State two disadvantages of mass production.

(c) State the concept of Economic Order Quantity.

(d) State two types of maintenance.

(e) Why is efficiency important in capacity utilization of a facility?

(f) State the concept of master schedule.

3. Answer any *six* of the following questions (each in around *120* words) : 4×6=24

(a) State four factors which affect process design.

(b) Discuss how batch size can affect production process.

(c) State four factors which affect plant location decisions.

(d) "Brainstorming process is very effective for idea generation for a new product." Comment.

(e) State four advantages of keeping appropriate inventory.

(f) State four advantages of production planning and control.

(g) Outline the role of negotiation in purchasing function.

4. Answer any *five* of the following questions (each in around *200* words) : 6×5=30

(a) Describe the interrelationship among product design, process design and inventory policies.

(b) A company manufactures decorative table lamps procuring glass lamp shades from outside source, then assembling it for sale. It needs glass lamp shades of a particular design as per the following details :

Annual Demand = 1000 units
Ordering cost = ₹ 5 per order
Holding cost = ₹ 2 per unit per year
Lead time = 5 days
Number of working days in a year = 250

Calculate :

(i) Economic Order Quantity of the lamp shades

(ii) Number of orders

(c) Explain the techniques used in control process.

(d) Write a note on materials requirement planning.

(e) Describe the important benefits of implementing quality management system.

(f) Discuss the importance of maintenance management.

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