

Code : 302402

**BBA 4th Semester Exam., 2018****PRODUCTION AND OPERATIONS  
MANAGEMENT**

Time : 3 hours

Full Marks : 60

Instructions :

- (i) The marks are indicated in the right-hand margin.
- (ii) There are **SEVEN** questions in this paper.
- (iii) Attempt **FIVE** questions in all.
- (iv) Question Nos. **1** and **2** are compulsory.

1. Answer the following as directed (any six) :  
2×6=12

- (a) The \_\_\_\_\_ is the probability that a good lot will be rejected by the sampling plan.
- (i) producer's risk
  - (ii) consumer's risk
  - (iii) market risk
  - (iv) Any of the above
- (Choose the correct option)

- (b) The steeper the OC curve, the better is the discrimination between good and bad lots.

( Write True or False )

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( Turn Over )

- (c) Which of the following is true regarding forward scheduling?  
Forward scheduling is the scheduling of
- (i) the end items or finished products
  - (ii) jobs as soon as the requirements are known
  - (iii) the start items or component parts
  - (iv) the final operation first beginning with the due date

( Choose the correct option )

- (d) Which of the following is not characteristic of project production?
- (i) Continuous flow of material
  - (ii) Highly mechanized material handling
  - (iii) Virtually zero manufacturing cycle time
  - (iv) All of the above

( Choose the correct option )

- (e) What type of process would a paper mill be most likely to use?
- (i) Continuous flow
  - (ii) Project
  - (iii) Job shop
  - (iv) Flow shop

( Choose the correct option )

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( Continue )

(f) What type of control chart is used to monitor the number of defects per unit?

- (i) *p*-chart
- (ii) *R*-chart
- (iii) *c*-chart
- (iv) *x*-bar chart

( Choose the correct option )

(g) The first steps of capacity planning and control do not include

- (i) studying the effect of queueing theory
- (ii) choosing the most appropriate capacity plan
- (iii) identifying the alternative capacity plans
- (iv) measuring aggregate demand and capacity

( Choose the correct option )

(h) Fixed position layout is adopted when

- (i) products are of different varieties
- (ii) product is very heavy involving assembly of large number of parts
- (iii) products are in large numbers
- (iv) All of the above

( Choose the correct option )

( Turn Over )

(i) What are the two basic types of production systems?

- (i) Automated and manual
- (ii) Intermittent and non-intermittent processes

(iii) Normal and continuous processes

(iv) Continuous process and batch

( Choose the correct option )

(j) Repetitive movements between work-stations which are difficult to be traced on string diagrams can be conveniently shown on flow diagrams.

( Write True or False )

2. Answer any *three* of the following : 4×3=12

(a) Discuss the basic steps in planning process.

(b) Explain cellular manufacturing with the help of a suitable example.

(c) Explain the use of statistical quality control in controlling quality of production operations.

- (d) How does the production and operations management function distinguish itself from other functions of management?
- (e) What is the assembly line balancing? List and describe briefly any one approach to solve assembly line balancing problems.
3. Name the various types of production system and explain the production on system suitable for job work. 12
4. What information is necessary for an industrial engineer to prepare a layout of a manufacturing unit? Distinguish between process and product layout. Explain where they are used. 12
5. Define inventory. What are the benefits for holding inventory? Define the types of inventory. What are the costs associated with inventories? 12
6. Outline the purposes of MRP and explain how an MRP system can achieve these purposes. Product 800 is made from 801 subassemblies, three 802 subassemblies, and two 803 subassemblies. An 801 subassembly consists of two units of

- component 406 and two units of component 407. The 802 subassembly is made from two units of component 205 and one unit of component 603. An 803 subassembly consists of one unit of component 407, one unit of 950 component, and three 747 subassemblies. A 747 subassembly is made from six units of item 910, three units of item 205, and one unit of item 942. Create a product structure tree for product 800, and determine how many units of each component is required to produce 150 units of product 800.
7. Explain the following in brief : 6×2
- (a) Product development techniques
- (b) World-class manufacturing

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