Total No. of printed pages = 4

BBA 181304

Roll No. of candidate

2019

B.B.A. 3rd Semester End-Term Examination

PRODUCTION AND OPERATIONS MANAGEMENT

Full Marks – 70   Time – Three hours

The figures in the margin indicate full marks
for the questions.

Answer Question No. 1 and any *four* from the rest.

1.   Answer the following :   (10 × 1 = 10)

   (i)   The maximum rate of output that can be achieved under ideal conditions is represented by the ——————— capacity.

   (ii) In a continuous production line, the variety of the output is high. (True/False)

   (iii) The time it takes, between placing a order to the supplier and the time of receiving is called ———————.

   (iv) Initial cost of a product layout is high (True/False)

   (v)   In EOQ model, carrying cost and ——————— cost are equal.

[Turn over

(vi) Services are produced and consumed simultaneously (True/False)

(vii) Submarines are manufactured using a product layout (True/False)

(viii) In level output rate plan ——————— is varied.

(ix) Reverse engineering reduces R & D costs. (True/ False)

(x) ABC classification of inventory follows a ——————— curve.

2. (a) What is ABC analysis? Explain with an example. (5)

(b) A music Company sources 9000 CDs from a supplier and where the cost of ordering is Rs. 10 per order and the carrying cost is 10% of the CD price. If each CD costs Rs. 20 and the supplier offers the following discounts

Quantity	Discount
100 – 449	2%
450 – 899	4%
900 and Above	5%

Evaluate the various discount option and EOQ option and advise the management of the Music Company on the best possible inventory policy. (10)

3. (a) Explain how flow shops are different from mass production process? (6)

(b) Explain the transformation process with respect to the manufacturing of potato chips. (9)
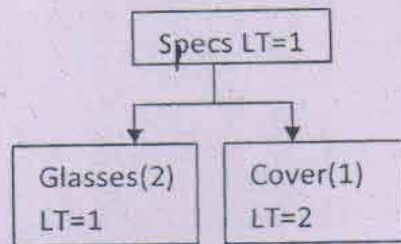
4. (a) Explain the inputs of MPP. (5)

(b)

```
            ┌─────────────┐
            │ Specs LT=1  │
            └──────┬──────┘
           ┌───────┴───────┐
           ▼               ▼
    ┌────────────┐  ┌────────────┐
    │ Glasses(2) │  │ Cover(1)   │
    │ LT=1       │  │ LT=2       │
    └────────────┘  └────────────┘
```

For the above product structure, the MPS of Specs is, 450 units in week 4, and 600 units in week 7. Available inventory of Specs is 100 units and the rest can be procured on the basis of lot sizing. Glasses can be bought in lot size of multiples of 500 units and cover can be bought in lot size of multiples of 200 units, and have no available current inventory. Prepare a MRP on the basis of given information. (10)

5. (a) Explain aggregate planning. (6)

(b) Explain the different production planning strategies in details. (9)

6. (a) What factors are to be considered while setting up a manufacturing facility in a particular location? (6)

(b) A company is evaluating two locations for setting up their manufacturing plant. Plant A has a fixed cost of Rs. 20,00,000 and a variable cost of Rs. 200 per unit. Plant B has a fixed cost of Rs. 25,00,000 and a variable cost of Rs. 170 per unit. If the selling prices are 300 per unit for both locations, carry out a breakeven analysis to select the better location. If the annual production is increased to 20000 units per year, which will be the better location? (9)

7. (a)

1	8	3
6	5	7
4	9	2

1	6	4
2	5	8
7	9	3

Layout A   Layout B

Product	Sequence	Quantity
A	2–5–8–4	900
B	3–2–7–8–1	1200
C	4–1–8–9–3	800
D	3–5–2–9	1100

The distance between consecutive departments is 10 meters and no diagonal movement is allowed. Based on the given data find the better layout on the basis of load-distance analysis.

(7)

(b) Write short notes on (any *two*) :   (2 × 4 = 8)

(i)   Dimensions of Quality

(ii) Six Sigma

(iii) TQM

_____