

(i) Printed Pages: 3

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(ii) Questions : 14

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Bachelor of Commerce 5<sup>th</sup> Semester

1128

**PRODUCTION AND OPERATION MANAGEMENT**

**Paper : BCM-504**

**Time Allowed : Three Hours]**

**[Maximum Marks : 80**

**Note :—** (1) Attempt any **FOUR** questions from Section-A.  
Each question carries **5** marks.

(2) Attempt any **TWO** questions from Section-B and  
Section-C each. Each question carries **15** marks.

**SECTION—A**

1. Explain process flow chart.
2. What do you mean by capacity planning ?
3. What are the principles of a good facility layout ?
4. Define the term motion study.
5. Determine the optimal Job sequence of following seven Jobs.  
The processing Time (in Hours) is given below :

<b>Jobs</b>	:	1	2	3	4	5	6	7
<b>Machine A :</b>		10	12	13	7	14	5	16
<b>Machine B :</b>		15	11	8	9	6	7	16

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[Turn over

6. Annual demand for a product is 9000 units. Price per unit is Rs. 2 and ordering cost is Rs. 40 per order. The inventory holding charge is 9% of inventory value. Further the lead time is 8 working days and total working days/year are 300.

Determine :—

(a) EOQ

(b) The Reorder Level.

4×5=20

### SECTION—B

7. What do you mean by Production and Operations Management ? Explain various functions of production and operations management.
8. Explain the various methods of Demand forecasting in detail.
9. "Location of a production facility is decided keeping in view the long term needs, analysis and forecast of business environment prevalent at a time." Comment.
10. A small project is composed of seven activities whose time estimates are given in the following Table :

Time required in Days

Activity	Event	Optimistic	Most Likely	Pessimistic
A	1-2	6	6	24
B	1-3	6	12	18
C	1-4	12	12	30
D	2-5	6	6	6
E	3-5	12	30	48
F	4-6	12	30	42
G	5-6	18	30	54

- (i) Find the expected duration and variance of each activity.
- (ii) What is expected project length ?
- (iii) Calculate the variance and standard deviation of the project length. 2×15=30

### SECTION—C

11. Discuss the tools and techniques used for recording of facts under method study.
12. Write a detailed note on elements of Logistics management.
13. Write short notes on following :—
  - (a) Principles of purchase management.
  - (b) Difference between motion study and time study.
  - (c) Just in Time (JIT).
14. The purchase department of an organisation has received an offer of quantities discount as under :

Price per Tonne in Rs.	Tonnes
1200	Less than 500
1180	500 and less than 1000
1160	1000 and less than 2000
1140	2000 and less than 3000
1120	3000 and above

The annual requirement for material is 5,000 tonnes. The delivery cost per order is Rs. 1,200. The stock holding cost is estimated at 20% of material cost per annum. You are required to advise the organisation the most Economical purchase level.

2×15=30