2018

(October)

BUSINESS ADMINISTRATION

(Honours)

(Production and Operations Management)

(BBAC–302)

Marks : 75

Time : 3 hours

The figures in the margin indicate full marks for the questions

1. *(a)* What are the basic principles of plant layout? Describe briefly the various types of plant layout. 4+6=10

(b) Indicate the dominant factors that a firm would consider in deciding the location of a production unit in North-East India. 5

Or

(a) Distinguish between a flow shop and a job shop. 4

(b) How is a vendor selected out of many competing vendors? 5

(c) Explain the steps involved in value analysis. 6

2. *(a)* Examine and explain the costs involved in the context of inventory management. 5

(b) A hospital purchases 2000 units of a particular item per year at a unit cost of ₹ 20. The ordering cost per order is ₹ 50 and the inventory carrying cost is 25%.

Find the optimal order quantity and the minimum total cost. If 3% discount is offered by the supplier for the purchase in lots of 1000 and more, should the hospital accept the offer? Justify. 10

Or

(a) How does the practice of selective management contribute towards the achievement of efficiency in an organization? 5

(b) Distinguish between codification of spare parts and standardization of items in the context of a manufacturing setup. 7

(c) How is VED analysis different from ABC analysis? 3

3. *(a)* What is meant by production planning? How is production plan an integral part of the overall corporate plan? 3+7=10

(b) What is assembly line balancing? Explain.

Or

(a) What is sequencing? How is it different from scheduling? 2+3=5

(b) Explain the different rules of dispatch followed in scheduling. 5

(c) *XYZ* Company has to process five items on three machines *A*, *B* and *C*. Processing times are given in the following table :

Item	*A*	*B*	*C*
P	4	4	6
Q	9	5	9
R	8	3	11
S	6	2	8
T	3	6	7

Using Johnson's rule, find the sequence that minimizes the total elapsed time. 5

4. *(a)* Describe the meaning and importance of supply chain management. 4+4=8

(b) What do you mean by linear programming? What are its major assumptions? 3+4=7

Or

Solve the following transportation problem using Vogel's approximation method : 15

Source	*Distribution centre*						*Availability*
	D_1	D_2	D_3	D_4	D_5	D_6	
S_1	9	12	9	6	9	10	5
S_2	7	3	7	7	5	5	6
S_3	6	5	9	11	3	11	2
S_4	6	8	11	2	2	10	9
Demand	4	4	6	2	4	2	

5. *(a)* Discuss the scope of total quality management. 6

(b) What is JIT production? Explain the benefits of JIT production system. 4+5=9

Or

(a) What is method study? Describe the steps involved in method study. 3+6=9

(b) Define quality. Briefly explain the types of quality control method available. 2+4=6

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