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**Presidency University**

**Bengaluru**

**SCHOOL OF COMMERCE**

**MAKE-UP EXAMINATION JULY 2024**

**Semester**: II

**Course Code**: BBA2012

**Course Name**: Production and Operation Management

**Program & Sem**: BBA

**Date**: 01 / July / 2024

**Time**: 9:30 am- 12:30 pm

**Max Marks**: 100

**Weightage**: 50%

**Instructions:**

1. *Read the all questions carefully and answer accordingly.*
2. *Question paper consists of three parts.*
3. *Scientific and Non Programable Calculators are Permitted.*
4. *Do not write any information on the question paper other than roll number.*

**Part A**

**Answer any FIVE Questions. (5 Q x 2 M = 10 M)**

1. What is operation management? (CO1) (Knowledge)

2. List out any two classification of plant Layout. (CO2) Knowledge)

3. Define Inventory control. (CO3) (Knowledge)

4. State the meaning of forecasting and describe how it is important in Performance Management.

(CO4) (Knowledge)

5. Out line any two methods of Forecasting. (CO5) (Knowledge)

6. Expand the Term EOQ and write the formula to calculate EOQ. (CO3)(Knowledge)

7. List out the four benefits of Inventory Control. (CO3 ) (Knowledge)

**Part B**

**Answer any FIVE Questions. (5 Q x 10 M = 50 M)**

8. Discuss the objectives of Production Management and Operation Management.

(CO1) (Comprehension)

9. The below table gives the various factors considered for location decisions and the factor rating assigned.  Each factor is based on its importance for location decisions and the location rating for the location. Alternatives based on the merit of each location in each of the factors considered.

|  |  |  |  |
| --- | --- | --- | --- |
| Factors | Factors Rating | Locating Rating Location(A)         Location(B) | |
| Tax advantages | 3 | 6 | 8 |
| Suitability of labour skills | 2 | 4 | 3 |
| Proximity to suppliers | 3 | 8 | 5 |
| Proximity to customers | 5 | 4 | 4 |
| Adequacy of water | 1 | 2 | 4 |
| Receptivity of community | 5 | 4 | 4 |
| Quality of the educational  system | 4 | 1 | 2 |
| Access to rail and air transport | 3 | 10 | 7 |
| Suitability of climate | 2 | 7 | 5 |
| Availability of power | 2 | 6 | 9 |

(CO2) (Comprehension)

10. A company wants to determine the optimal order quantity for a particular product.

The annual demand for the product is 11,000 units, the ordering cost is $60 per order,

and the carrying cost is $4 per unit per year. The company wants to minimize the total

annual cost and calculate EOQ.

(CO3) (Comprehension)

11. Max Well Manufacturing Company is a leading manufacturer of automotive components.

The company operates several production facilities across the country and has a large

customer base. The company's success depends on its ability to meet customer demand

while maintaining high-quality standards.

Required: Describe the production planning objectives from the above case.

(CO4)(Comprehension)

12 .Describe the forecasting methods in details. (CO5) (Comprehension)

13. Explain the difference between Production Management and Operation Management.

(CO1) (Comprehension)

14. Discuss the benefits and limitations of Inventory control . (CO3) )(Comprehension)

**Part C**

**Answer any TWO Questions. (2 Q x 20 M = 40 M)**

15. a. Define plant location and explain the factors influencing Plant Location.(10 Marks)

b. State the meaning of Plant Layout and its objectives. (10 Marks)

(CO2) ( Comprehension)

16. Blue Mart company wants to determine the optimal order quantity for a particular product. The annual demand for the product is 15,000 units, the ordering cost is $80 per order, and the carrying cost is $5 per unit per year. The company wants to minimize the total annual cost.

A.Calculate EOQ

B.Calculate the number of orders per year (N) and the time between orders (T)

C.Calculate the total annual cost (TC)

(CO3) (Comprehension)

17. XYZ Inc. is considering three different locations to establish a new factory. The company has

identified five factors that will impact its decision: labour availability, transportation costs, tax

rates, proximity to suppliers, and local regulations. They have assigned weights to each factor

based on their importance, as shown in the table below:

|  |  |
| --- | --- |
| Factors | Weights |
| Labour availability | 0.4 |
| Transportation costs | 0.3 |
| Tax rates | 0.16 |
| Proximity to suppliers | 0.35 |
| Local regulations | 0.1 |

The company has rated each location on a scale of 1 to 5 for each of the five factors.

The ratings are shown in the table below:

|  |  |  |  |
| --- | --- | --- | --- |
| Factor | Location A | Location B | Location C |
| Labour availability | 4 | 3 | 5 |
| Transportation costs | 2 | 4 | 3 |
| Tax rates | 5 | 2 | 4 |
| Proximity to suppliers | 3 | 4 | 5 |
| Local regulations | 4 | 5 | 3 |

Required: Using the Weighted factor rating method, which location should XYZ Inc. choose?

(CO2)( Comprehension)