UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, May 2023

Course: Operation and Material Management   **Semester: II**
Program: BBA-Core   **Time : 03 hrs.**
Course Code: LSCM 1004   **Max. Marks: 100**

Instructions:

SECTION A
10Qx2M=20Marks

S. No.		Marks	CO
Q1	Facilities affect a) worker efficiency b) capacity and speed of production c) system responsiveness to changes in product mix or product volume d) all answer choices are correct	2	CO1
Q2	Facility layouts are designed to a) Minimize movement and material handling costs b) Eliminate bottlenecks c) Promote product and service quality d) all answer choices are correct	2	CO1
Q3	In a _____ layout, work stations are arranged according to the general function they perform without regard to any particular product. a) product b) process c) fixed position d) storage	2	CO1

Q4	An inventory system in which the inventory on hand is counted at set times on a continual basis and an order is placed to return the inventory stock to a desired level is a
	
	    a) periodic system
	    b) continuous system
	    c) ABC system
	    d) perpetual system
		2	CO1

Q5	In an EOQ model the optimal order quantity occurs where
	
	    a) the slope of the total cost curve equals zero
	    b) ordering cost equals carrying cost
	    c) the differential of the total cost curve with respect to the order size equals zero
	    d) all answer choices are correct
		2	CO1

Q6	If a company has an ordering cost of $250, a carrying cost of $4 per unit, and annual product demand of 6,000 units, the total minimum inventory cost is approximately
	
	    a) $3,464
	    b) $3,250
	    c) $3,944
	    d) $2,921
		2	CO1

Q7	If a store has annual demand (365 days per year) of 6,000 units and the lead time for it to receive an order from its supplier is 20 days, its EOQ reorder point is approximately
	
	    a) 300 units
	    b) 329 units
	    c) 428 units
	    d) 600 units
		2	CO1

Q8	The final definition of quality is the customer's perception of a product's or service's
	
	    a) quality of conformance
	    b) quality of design
	    c) fitness for use
	    d) process capability
		2	**CO1**

Q9	VED analysis of inventory management stands for_____
	
	    a) vital-essential-desirable
	    b) valuable-easy-difficult
	    c) very-essentially-desired
	    d) valuable-effective-difficult to obtain
		2	**CO1**

Q10	In 'ABC' analysis of Inventory control 'A' stands for:
	
	    a) High valued and small number of items
	    b) Low valued and small number of items
	    c) High valued and maximum number of items
	    d) Medium valued and medium number of items
		2	**CO1**

SECTION B **4Qx5M= 20 Marks**		
Q1	What is VED?	**5**	**CO2**
Q2	What do you mean by KANBAN?	**5**	**CO2**
Q3	Discuss Capacity planning in brief.	**5**	**CO2**
Q4	Define Quality control?	**5**	**CO2**

SECTION-C **3Qx10M=30 Marks**		
Q1	Explains the Production planning and Control in details.	**10**	**CO3**
Q2	Explains the EOQ model with constant rate of demand with useful diagrams.	**10**	**CO3**
Q3	What are the objectives of Operation managements? Discuss the roles and responsibilities of operation managers. OR What are various factors affecting facility location decisions?	**10**	**CO3**

SECTION-D
2Qx15M= 30 Marks

Q1	The production department of a company requires 3,600 kg of raw material for manufacturing a particular item per year. It has been estimated that the cost of placing an order is Rs 36 and the cost of carrying inventory is 25 per cent of the investment in the inventories. The price is Rs 10 per kg. Help the purchase manager to determine an ordering policy for raw material. Determine. (a) Optical lot size (b) Optimal Order Cycle time (c) Total Inventory Variable Cost (d) Total inventory cost (e) If the order quantity changes to 350, what would be the impact on the total variable cost?	15	CO4
Q2	What are the long term and short-term capacity strategies in capacity planning? Elaborate. OR The performance times are shown besides task time on the node. Determine line efficiency, balance delay for cycle time a) 15 b)18 	15	CO4