Name: Enrolment No:	

UPES

End Semester Examination, December 2023

Course: Operations and Materials Management — **Semester: III**

Program: BBA(AVM) — **Time: 03 hrs.**

Course Code: LSCM2001 — **Max. Marks: 100**

Instructions: As per sections

SECTION A
10Qx2M=20Marks

S. No.	**Attempt all questions in this section**	**Marks**	**CO**
Q 1	**Multiple choice questions:**		
1.1	Which layout would be most suitable for a car manufacturing plant? a. Process layout b. Product layout c. Fixed-position layout d. Cellular layout	**2**	**CO1**
1.2	What factor is NOT typically considered when designing a facility layout? a. Safety regulations b. Cost of utilities c. Employee preferences d. Distance between workstations	**2**	**CO1**
1.3	Which of the following is a JIT inventory system? a. A system that orders materials as needed b. A system that orders materials in large quantities to take advantage of discounts c. A system that orders materials based on forecasts of future demand d. A system that orders materials based on the actual demand for the material	**2**	**CO1**
1.4	Which of the following is NOT a responsibility of the operations management department in an aviation organization? a. Scheduling flights b. Managing aircraft maintenance c. Staffing the flight crews d. Marketing and selling tickets	**2**	**CO1**
1.5	What does 'kanban' mean in the context of JIT? a. Inventory list b. Production plan c. Signal or visual cue d. Quality control method	**2**	**CO1**
1.6	Which stage of ERP implementation involves evaluating the existing system and preparing for the new system?	**2**	**CO1**

	a. Design b. Implementation c. Planning d. Go-live		
1.7	What does facility layout primarily focus on? a. Managing employee schedules b. Designing the interior decor c. Arrangement of departments, workstations, and equipment d. Employee training programs	**2**	**CO1**
1.8	Which of the following is NOT a key principle of Just-in-Time? a. Continuous improvement b. Waste reduction c. Stockpiling excess inventory d. Synchronizing production with demand	**2**	**CO1**
1.9	What's the primary purpose of leveling production in JIT? a. To decrease efficiency b. To match production to demand c. To increase batch sizes d. To encourage overproduction	**2**	**CO1**
1.10	Which of the following is a benefit of implementing JIT? a. Increased inventory costs b. Higher storage space requirements c. Reduced lead times d. Overproduction encouragement	**2**	**CO1**
SECTION B 4Qx5M= 20 Marks			
Q 2	**Attempt any four of the following.**		
2.1	Write a short note on TQM and ERP.	**5**	**CO2**
2.2	Discuss various functions of the Airline with examples.	**5**	**CO2**
2.3	What do you understand by quality control?	**5**	**CO2**
2.4	What is a KANBAN system?	**5**	**CO2**
2.5	What are the primary advantages of a product layout?	**5**	**CO2**
SECTION-C 3Qx10M=30 Marks			
Q 3	**Attempt all questions in this section:**		
3.1	A manufacturer of garments is actively considering five alternative locations for setting up its factory. The locations vary in terms of the advantages that it provides to the firm. Hence, the firm requires a method of identifying the most appropriate location. Based on a survey of its senior executives the firm has arrived at six factors to be considered for final site selection. The ratings of each factor on a scale of 1 to 100 provide this information. Further, based on some detailed analysis of both the qualitative and quantitative data available for each of the locations, the	**10**	**CO3**

	rating for the locations against each factor has also been arrived at (on a scale of 0 to 100). Using this information obtain a ranking of the alternative locations. **Factor ratings** **Factors** / **Ratings** Availability of infrastructure (F1) — 90 Size of the market (F2) — 60 Industrial relations climate (F3) — 50 Tax benefits and concessions (F4) — 30 Availability of cheap labor (F5) — 30 Nearness to port (F6) — 65 Ratings of each location against the factors Factors / Location1 / Location2 / Locations3 / Location4 / Location5 F1 / 20 / 40 / 60 / 35 / 55 F2 / 30 / 30 / 40 / 60 / 80 F3 / 80 / 30 / 50 / 60 / 50 F4 / 80 / 20 / 10 / 20 / 20 F5 / 70 / 70 / 45 / 50 / 50 F6 / 20 / 40 / 90 / 50 / 60		
3.2	Write the objectives and importance of the facility layout.	**10**	**CO3**
3.3	Discuss the impact of a well-designed facility layout on employee productivity, safety, and morale. How can a good layout contribute to a better working environment? **OR** What are the various techniques of inventory control?	**10**	**CO3**
	SECTION-D **2Qx15M= 30 Marks**		
Q4	**Attempt all questions in this section:**		
4.1	What do you understand by plant layout? Illustrated the various types of layouts.	**15**	**CO4**
4.2	Discuss the assumptions underlying the basic EOQ formula. Also, state the economic order quantity model and discuss its sensitivity in inventory management. **OR** A company has determined from its analysis of production and accounting data that, for part number KC-438, the annual demand is equal to 10,000 units, and the cost to purchase the item is 36 Rs. Per order, and the holding cost is 2 Rs. /unit/year. Determine: a. What should the economic order quantity be? b. Estimate the total number of orders for the year.	**15**	**CO4**