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Seat No.: ____ Enrolment No.__ GUJARAT TECHNOLOGICAL UNIVERSITY MBA (International Business) - SEMESTER 2 - EXAMINATION - SUMMER 2019 Subject Code: 1529303 Date:11/05/2019 **Subject Name: Global Operations Management** Time: 10.30AM TO 1.30 PM **Total Marks: 70 Instructions:** 1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. **Q.1** Define the following terms: 14 (a) MRP (b) CPM (c) JIT (d) Slack Time (e) TQM (f) Mass customization (g) Taguchi Concept $\mathbf{Q.2}$ (a) Explain Global Operations Management and its ten Key Strategic decisions. **07** Suppose you are working with project consultant. IKEA a Swedish Home 07 **(b)** Furnishing major opened its first store in Hyderabad recently, five years after it received approval to invest in the country's single-brand retail sector and wants to ensure its presence across India. IKEA has approached you for guidance in locating its facility location in Gujarat. Guide your Client with justification on various factors considered for said decision. OR Discuss the strategies to adjust capacity and manage demand along with 07 **(b)** examples. 0.3 Explain the different types of layout. Additionally differentiate between 07 (a) product and process layout. **(b)** Write a detailed note on Just in time to achieve competitive advantage 07 OR 0.3 (a) What is Aggregate Plan? Discuss aggregate planning Options with 07 advantages and disadvantages. Explain Supply chain Integration and Sustainability. List down and discuss 07 major challenges to ensure Supply chain Sustainability. Discuss strategic importance of Maintenance and Reliability in an 07 $\mathbf{Q.4}$ (a) organisation.



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(b) Explain Lean Production system and eight types of wastes to ensure value 07 addition by each and every activity of system.

OF

- Q.4 (a) Explain Mass customization focus as one of the process strategy and discuss 07 challenges for mass customization strategy with suitable Examples.
 - (b) A project has been defined to contain the following activities, along with their time completion,

| Activity | Time | Estimate | Immediate | |
|----------|------|----------|-----------|-------------|
| | a | m | b | Predecessor |
| A | 1 | 4 | 7 | - |
| В | 2 | 6 | 7 | A |
| С | 3 | 4 | 6 | A,D |
| D | 6 | 12 | 14 | A |
| Е | 3 | 6 | 12 | D |
| F | 6 | 8 | 16 | В,С |
| G | 1 | 5 | 6 | E,F |

- a. Calculate the Expected time and Variance for each activity.
- b. Draw the Critical Path diagram.
- c. Calculate and show early start, early finish and late start, late finish times.
- d. Show the critical path.

What is the probability that the project can be completed in 34 weeks?

Q.5 ABC Enterprises has three plants manufacturing dry cells, located at different locations. Production cost differs from plant to plant. There are five offices of the company located in different regions of the country. The selling prices can differ from region to region. The shipping cost from each plant to each sales office and other information is given below.

Production Information

| Plant Number | Maximum capacity (in number of units) | Production cost per unit |
|--------------|--|-----------------------------|
| | 150 | 20 |
| 2 | 200 | 22 |
| 3 | 125 | 18 |

Shipping Cost (Rupees)

| Plant Number | Sales Office | | | | | |
|-----------------|--------------|---|---|---|---|--|
| | A | В | C | D | E | |
| 1 | 1 | 1 | 5 | 9 | 4 | |
| 2 | 9 | 7 | 8 | 3 | 6 | |
| 3 | 4 | 5 | 3 | 2 | 7 | |

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Demand and Selling Price

| | A | В | C | D | E |
|------------------------|----|-----|----|----|-----|
| Demand (units) | 80 | 100 | 75 | 45 | 125 |
| Selling Price (Rupees) | 30 | 32 | 31 | 34 | 29 |

- Q.5 (a) Derive a profit matrix indicating the profit per unit obtained when produced and sold in various combinations of plants for sales office A & B. Assume all the other costs (apart from production cost and shipping cost) to be zero.
 - (b) Find out the most profitable distribution schedule of the company using North West 07 Corner rule method.

OR

- (a) Derive a profit matrix indicating the profit per unit obtained when produced and sold in various combinations of plants for sales office C & D. Assume all the other costs (apart from production cost and shipping cost) to be zero.
- (b) Find out the most profitable distribution schedule of the company using Vogel's **07** Approximation method.

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