**JAIPURIA INSTITUTE OF MANAGEMENT, INDORE**

**PGDM SECOND TRIMESTER (Batch 2020-22)**

**END TERM EXAMINATION, FEBRUARY-2021**

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| Course Name | **Operations Management** | Course Code | **OM 202** |
| Max. Time | **2 hours** | Max. Marks | **40** |

**INSTRUCTIONS:**

* *Attempt all questions.*
* *Please mention name of the organization at the beginning of each question.*
* *Students must send the picture of all answers and pages via Moodle or Email as per instructions from examination department.*
* *Students must note that if two answers are found similar, both students will be awarded ZERO marks.*

Q.1Examine the Operations Management concept of “Input - Transformation Process – Output” with a business illustration and example. **(8 Marks)**

Q.2Examine the factors affecting Facility location with a business illustration and example. **(8 Marks)**

Q.3Examine following Operations Management concepts with a business illustration and example.

 a. Seven QC tools

 b. Kaizen and 5 “S” concept **(4 + 4 Marks)**

Q.4 **“**Sita Garments” produces all type of women dresses. The organization has 8 departments. The company recently purchased a piece of land to construct new garment manufacturing facility and invited layout drawings from two architects. The garment manufactured, their process flow and two proposed layouts are given below. Each department is 100 x 100 meters in dimensions. Examine both the options and suggest the better option which has lesser material movement.  **(8 Marks)**

|  |  |  |
| --- | --- | --- |
| **Layout A** |  | **Layout B** |
| **1** | **4** | **6** | **8** |  | **3** | **5** | **7** | **8** |
| **2** | **3** | **5** | **7** |  | **1** | **2** | **4** | **6** |

|  |  |  |
| --- | --- | --- |
| **Product Name** | **Product Movement** | **Annual Quantity to be produced** |
| Women ethnic dress | 1-3-4-7-8 | 2000 |
| Women designer Saree | 1-4-5-6-2 | 3000 |
| Women Formal dress | 2-3-6-7-4 | 5000 |
| Women Formal Suits | 3-4-1-2-7 | 5000 |
| Women Formal Skirts | 4-3-5-6-2 | 3000 |

Q.4 **“**Rama Garments” produces all type of men dresses. The organization has 8 departments. The company recently purchased a piece of land to construct new garment manufacturing facility and invited layout drawings from two architects. The garment manufactured, their process flow and two proposed layouts are given below. Each department is 100 x 100 meters in dimensions. Examine both the options and suggest the better option which has lesser material movement.  **(8 Marks)**

|  |  |  |
| --- | --- | --- |
| **Layout A** |  | **Layout B** |
| **6** | **3** | **1** | **7** |  | **2** | **5** | **6** | **8** |
| **2** | **4** | **5** | **8** |  | **4** | **3** | **1** | **7** |

|  |  |  |
| --- | --- | --- |
| **Product Name** | **Product Movement** | **Annual Quantity to be produced** |
| Men ethnic dress | 1-3-4-2-5 | 2500 |
| Men designer Sherwani | 3-4-2-1-7 | 3500 |
| Men Formal shirts | 1-8-7-4-3 | 4000 |
| Men Formal Suits | 2-5-3-4-7 | 2000 |
| Men Kurta & Pajamas | 3-8-1-5-6 | 6000 |

Q.4 **“**Wonder - Boys Garments” produces all type of dresses for young boys. The organization has 8 departments. The company recently purchased a piece of land to construct new garment manufacturing facility and invited layout drawings from two architects. The garment manufactured, their process flow and two proposed layouts are given below. Each department is 100 x 100 meters in dimensions. Examine both the options and suggest the better option which has lesser material movement.  **(8 Marks)**

|  |  |  |
| --- | --- | --- |
| **Layout A** |  | **Layout B** |
| **3** | **7** | **1** | **6** |  | **7** | **6** | **5** | **1** |
| **2** | **8** | **4** | **5** |  | **2** | **3** | **4** | **8** |

|  |  |  |
| --- | --- | --- |
| **Product Name** | **Product Movement** | **Annual Quantity to be produced** |
| Boys ethnic dress | 4-3-5-7-8 | 1000 |
| Boys designer Sherwani | 1-8-3-6-5 | 2000 |
| Boys Formal shirts | 3-2-6-5-8 | 3500 |
| Boys Formal Suits | 6-2-1-5-7 | 1000 |
| Boys Kurta & Pajamas | 3-5-4-1-8 | 3000 |

Q.4 **“**Princess Garments” produces all type of dresses for young girls. The organization has 8 departments. The company recently purchased a piece of land to construct new garment manufacturing facility and invited layout drawings from two architects. The garment manufactured, their process flow and two proposed layouts are given below. Each department is 100 x 100 meters in dimensions. Examine both the options and suggest the better option which has lesser material movement.  **(8 Marks)**

|  |  |  |
| --- | --- | --- |
| **Layout A** |  | **Layout B** |
| **4** | **1** | **3** | **7** |  | **5** | **3** | **2** | **6** |
| **6** | **5** | **8** | **2** |  | **1** | **4** | **8** | **7** |

|  |  |  |
| --- | --- | --- |
| **Product Name** | **Product Movement** | **Annual Quantity to be produced** |
| Girls ethnic dress | 1-5-2-7-6 | 3500 |
| Girls designer kurta | 3-2-1-6-7 | 2500 |
| Girls skirts | 5-7-3-2-8 | 4000 |
| Girls Formal tops | 6-2-8-7-3 | 1000 |
| Girls Salwar Kameez | 8-1-5-4-2 | 3000 |

**Q5. “**Grape Fruit Juices” is a producer of bulk fruit juice and supplies to a multinational company. The annual demand of sugar is 1,000,000 Kgs. The ordering cost is Rs. 5000/- per order and carrying cost is Rs 100 per unit per year. The unit price of sugar is Rs 40/- per Kg. Determine the quantity per order so as to minimize the total variable cost. Also compute the total material cost for this purchasing policy. **(8 Marks)**

**Q5. “**Apple Fruit Juices” is a producer of bulk fruit juice and supplies to a multinational company. The annual demand of sugar is 1,200,000 Kgs. The ordering cost is Rs. 4000/- per order and carrying cost is Rs 90 per unit per year. The unit price of sugar is Rs 45/- per Kg. Determine the quantity per order so as to minimize the total variable cost. Also compute the total material cost for this purchasing policy. **(8 Marks)**

**Q5. “**Orange Fruit Juices” is a producer of bulk fruit juice and supplies to a multinational company. The annual demand of sugar is 1,500,000 Kgs. The ordering cost is Rs. 4500/- per order and carrying cost is Rs 80 per unit per year. The unit price of sugar is Rs 48/-per Kg. Determine the quantity per order so as to minimize the total variable cost. Also compute the total material cost for this purchasing policy. **(8 Marks)**

**Q5. “**Guava Fruit Juices” is a producer of bulk fruit juice and supplies to a multinational company. The annual demand of sugar is 1,600,000 Kgs. The ordering cost is Rs. 4800/- per order and carrying cost is Rs 85 per unit per year. The unit price of sugar is Rs 52/- per Kg. Determine the quantity per order so as to minimize the total variable cost. Also compute the total material cost for this purchasing policy. **(8 Marks)**