INSTITUTE OF AERONAUTICAL ENGINEERING (AUTONOMOUS)

Dundigal, Hyderabad-500 043

MASTER OF BUSINESS ADMINISTRATION

ASSIGNMENT

Course Name	**OPERATIONS MANAGEMENT**
Course Code	**CMB0013**
Class	**MBA II SEMESTER**
Branch	**MBA**
Year	**2017 – 2018**
Course Faculty	**Ms.Azara, Assistant Professor, Department of MBA**

COURSE OBJECTIVES:

The course should enable the students to:

I	Understand the strategic role of operations management in creating and enhancing a firm's competitive advantages.
II	Analyze the key concepts, issues and different types of techniques of Operations Management in both manufacturing and service organizations.
III	Know about the interdependence of the operations function with the other key functional areas of a firm.
IV	Apply analytical skills and problem-solving tools to the analysis of the operations problems.

ASSIGNMENT-I

S. No	Question	Blooms Taxonomy Level	Course Outcome
	UNIT-I		
1	**Define** operations management and explain the evolution of production and operations management?	Understand	CMB0013:02
2	What do you mean by product life cycle and process life cycle? explain the relationship between them	Analyze	CMB0013:03
3	**What** are the various technologies used in processes of operations management in detail?	Remember	CMB0013:03
4	**Discuss** the interface between operation function and other functional areas?	Remember	CMB0013:02
5	**Distinguish** between operations management and production management?	Understand	CMB0013:02
S. No	**Question**	**Blooms Taxonomy Level**	**Course Outcome**
	UNIT – II		
1	**Explain** about the plant location ?discuss the need for plant location what are the steps involved in selecting a location	Remember	CMB0013:04

<table>
<tr><td>2</td><td>Find the sequence that minimizes the total elapsed time require to complete the following tasks, in minutes are given below, calculate the total elapsed time also
<table>
<tr><th>machine</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th></tr>
<tr><td>M1</td><td>14</td><td>10</td><td>10</td><td>13</td><td>12</td><td>11</td><td>9</td><td>9</td></tr>
<tr><td>M2</td><td>11</td><td>14</td><td>10</td><td>9</td><td>14</td><td>14</td><td>7</td><td>10</td></tr>
<tr><td>M3</td><td>9</td><td>8</td><td>10</td><td>11</td><td>12</td><td>7</td><td>8</td><td>9</td></tr>
</table></td><td>Analyze</td><td>CMB0013:06</td></tr>
<tr><td>3</td><td>In a batch production ,five jobs A ,B,C,D, and E are required to be processed on three machines as detailed below .what is the optimum sequence of jobs and elapsed time
<table>
<tr><th>Process time in minutes</th><th>Job A</th><th>Job B</th><th>Job C</th><th>Job D</th><th>Job E</th></tr>
<tr><td>cleaning</td><td>7</td><td>6</td><td>8</td><td>9</td><td>10</td></tr>
<tr><td>machining</td><td>1</td><td>4</td><td>5</td><td>2</td><td>3</td></tr>
<tr><td>painting</td><td>3</td><td>2</td><td>4</td><td>5</td><td>7</td></tr>
</table></td><td>Analyze</td><td>CMB0013:06</td></tr>
<tr><td>4</td><td>Define maintenance systems and Explain various types of maintenance systems?</td><td>Analyze</td><td>CMB0013:05</td></tr>
<tr><td>5</td><td>Find the sequence the optimizes the total elapsed time using the following data
<table>
<tr><th>machines</th><th>Job1</th><th>Job2</th><th>Job3</th><th>Job4</th><th>Job5</th><th>Job6</th></tr>
<tr><td>A</td><td>15</td><td>17</td><td>13</td><td>14</td><td>18</td><td>15</td></tr>
<tr><td>B</td><td>12</td><td>13</td><td>9</td><td>10</td><td>11</td><td>12</td></tr>
<tr><td>C</td><td>11</td><td>16</td><td>15</td><td>13</td><td>12</td><td>12</td></tr>
</table></td><td>Analyze</td><td>CMB0013:04</td></tr>
<tr><td colspan="4">UNIT – III</td></tr>
<tr><td>1</td><td>Explain the objectives , functions, and advantages of quality control?</td><td>Understand</td><td>CMB0013:07</td></tr>
<tr><td>2</td><td>Explain about the quality circles ?explain its characteristics and objectives of quality circles?</td><td>Remember</td><td>CMB0013:08</td></tr>
<tr><td>3</td><td>Write about the acceptance sampling? Explain different types of sampling plans used for acceptance sampling?</td><td>Understand</td><td>CMB0013:08</td></tr>
<tr><td>4</td><td>The following data gives readings for quality control job. Determine whether the process is under control
<table>
<tr><th>Sample no</th><th>Mean X</th><th>Range R</th></tr>
<tr><td>1</td><td>3.25</td><td>0.09</td></tr>
<tr><td>2</td><td>3.37</td><td>0.02</td></tr>
<tr><td>3</td><td>3.35</td><td>0.11</td></tr>
<tr><td>4</td><td>3.30</td><td>0.16</td></tr>
<tr><td>5</td><td>3.38</td><td>0.10</td></tr>
<tr><td>6</td><td>3..34</td><td>0.12</td></tr>
</table></td><td>Analyze</td><td>CMB0013:09</td></tr>
<tr><td>5</td><td>Describe about the method study and its objectives? Write the steps involved?</td><td>Remember</td><td>CMB0013:07</td></tr>
</table>

ASSIGNMENT-II

S. No	Question	Blooms Taxonomy Level	Course Outcome
	UNIT – III		
1	**Discuss** the various control charts for attributes? Explain them briefly?	Remember	CMB0013:08
2	**Explain** about the control charts with graphical representation and explain its objectives	Understand	CMB0013:09
3	**What is** work study? Explain various techniques of work study?	Understand	CMB0013:09

<table>
<tr><td>4</td><td>The following table gives the number of defects in a casting used to making crank case of diesel engine. Construct appropriate control chart with control limits and comment on the process
<table>
<tr><th>c.no</th><th>1</th><th>2</th><th>3</th><th>4</th><th>5</th><th>6</th><th>7</th><th>8</th><th>9</th><th>10</th></tr>
<tr><td>No of defects</td><td>15</td><td>11</td><td>25</td><td>10</td><td>12</td><td>20</td><td>15</td><td>10</td><td>17</td><td>13</td></tr>
</table></td><td>Analyze</td><td>CMB0013:09</td></tr>
<tr><td colspan="4">UNIT – IV</td></tr>
<tr><td>1</td><td>What do you mean by make or buy decision? Discuss the pros and cons of this decision?</td><td>Remember</td><td>CMB0013:10</td></tr>
<tr><td>2</td><td>Explain the role of vendor in production and operations management (POM)?</td><td>Analyze</td><td>CMB0013:10</td></tr>
<tr><td>3</td><td>What are the objectives of MRP? Explain its advantages and disadvantages of MRP?</td><td>Analyze</td><td>CMB0013:11</td></tr>
<tr><td>4</td><td>Explain different types of techniques for prioritization of material?</td><td>Remember</td><td>CMB0013:12</td></tr>
<tr><td>5</td><td>How do you evaluate the performance of suppliers? What are the goals of vendor rating?</td><td>Understand</td><td>CMB0013:12</td></tr>
<tr><td colspan="4">UNIT – V</td></tr>
<tr><th>S. No</th><th>Question</th><th>Blooms Taxonomy Level</th><th>Course Outcome</th></tr>
<tr><td>1</td><td>What is stores management? What are the requirements for effective management of stores?</td><td>Remember</td><td>CMB0013:13</td></tr>
<tr><td>2</td><td>Explain the concept of safety stock. what are the various methods used in the computation of safety stock?</td><td>Understand</td><td>CMB0013:13</td></tr>
<tr><td>3</td><td>A company uses 12 different items in the manufacturing process. Their annual requirement and unit costs are given as fallows
<table>
<tr><td>items</td><td>quantity</td><td>Unit cost</td></tr>
<tr><td>1</td><td>9000</td><td>10</td></tr>
<tr><td>2</td><td>300</td><td>750</td></tr>
<tr><td>3</td><td>5400</td><td>210</td></tr>
<tr><td>4</td><td>3800</td><td>90</td></tr>
<tr><td>5</td><td>12400</td><td>10</td></tr>
<tr><td>6</td><td>90</td><td>1200</td></tr>
<tr><td>7</td><td>600</td><td>400</td></tr>
<tr><td>8</td><td>22000</td><td>2</td></tr>
<tr><td>9</td><td>750</td><td>175</td></tr>
<tr><td>10</td><td>1000</td><td>250</td></tr>
<tr><td>11</td><td>7600</td><td>75</td></tr>
<tr><td>12</td><td>10000</td><td>4</td></tr>
</table></td><td>Remember</td><td>CMB0013:15</td></tr>
<tr><td>4</td><td>A factory uses annually 24,000 units of raw material which costs rs.125 per unit placing each order costs rs.25 and carrying costs is 6% per year of average inventory.
i)find out the economic order quantity.
ii)how many orders are to be placed in a year
iii)what is the total inventory cost for year including the cost of material</td><td>Remember</td><td>CMB0013:15</td></tr>
<tr><td>5</td><td>What are the various costs involved in inventory management ?</td><td>Remember</td><td>CMB0013:14</td></tr>
</table>

Prepared by: Ms.Azara, Assistant Professor, Department of MBA

Date:15/12/2017

HOD, Master of Business Administration