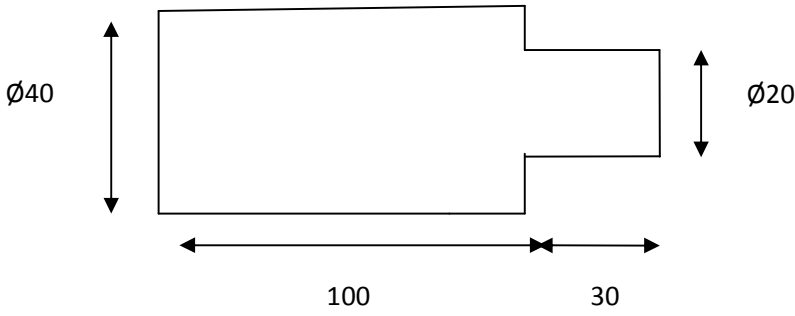


GUJARAT UNIVERSITY
B.E. SEM VIII (MECHANICAL)
M-803 PRODUCTION AND OPERATIONS MANAGEMENT

| | | | | | | | | | | | | | | | | | | | |
|-----------|--|------|------|------|------|------|------|------|------|------|-----------|-----|-----|-----|-----|-----|-----|-----|-----|
| 1. | Explain types of production systems and their characteristics? | | | | | | | | | | | | | | | | | | |
| 2. | What do you understand by mass production system and batch production? | | | | | | | | | | | | | | | | | | |
| 3. | Define production planning and control? | | | | | | | | | | | | | | | | | | |
| 4. | What are main functions of PPC department at any industry? | | | | | | | | | | | | | | | | | | |
| 5. | Differentiate between standardization and simplification . | | | | | | | | | | | | | | | | | | |
| 6. | Explain major factor consideration during wheel chair design? | | | | | | | | | | | | | | | | | | |
| 7. | Find the sales forecasting for year 2014 of product abc with simple average and moving averages methods. | | | | | | | | | | | | | | | | | | |
| | <table border="1"> <tr> <td>Year</td> <td>2006</td> <td>2007</td> <td>2008</td> <td>2009</td> <td>2010</td> <td>2011</td> <td>2012</td> <td>2013</td> </tr> <tr> <td>Sales no.</td> <td>200</td> <td>222</td> <td>250</td> <td>300</td> <td>400</td> <td>150</td> <td>225</td> <td>350</td> </tr> </table> | Year | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | Sales no. | 200 | 222 | 250 | 300 | 400 | 150 | 225 | 350 |
| Year | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | | | | | | | | | | | |
| Sales no. | 200 | 222 | 250 | 300 | 400 | 150 | 225 | 350 | | | | | | | | | | | |
| 8. | <p>Prepare a route sheet for given component.</p>  | | | | | | | | | | | | | | | | | | |
| 9. | <p>Explain following terms with suitable example.</p> <ul style="list-style-type: none"> (i) Route sheet (ii) Bill of material (iii) Aggregate planning | | | | | | | | | | | | | | | | | | |
| 10. | What is importance of Master production schedule in MRP- I? | | | | | | | | | | | | | | | | | | |
| 11. | Explain MRP I and its components. | | | | | | | | | | | | | | | | | | |
| 12. | Discuss charts for variable and attributes and their application. | | | | | | | | | | | | | | | | | | |
| 13. | Discuss concepts of quality circles. | | | | | | | | | | | | | | | | | | |

| 14. | How to prepare any of project report, | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|--|-----------------|---------------|-----------------|-----|----------|-----|-------|-----|-------|-----|-----|-----|------|-----|------|-----|--------|-----|-----------|-----|---------|-----|----|---|---|----|---|
| 15. | Give Introduction to ISO 9000 and ISO 14000. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 16. | Give importance of Management information systems. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 17. | Discuss different types of inspection? | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18. | <p>A project consists of 8 activities whose duration in days together with their relationships are given as follows:</p> <table border="1"> <thead> <tr> <th>Activities</th> <th>Duration days</th> <th>Can start after</th> </tr> </thead> <tbody> <tr> <td>A</td> <td>12</td> <td>--</td> </tr> <tr> <td>B</td> <td>8</td> <td>A</td> </tr> <tr> <td>C</td> <td>13</td> <td>--</td> </tr> <tr> <td>D</td> <td>7</td> <td>C</td> </tr> <tr> <td>E</td> <td>8</td> <td>B,</td> </tr> <tr> <td>F</td> <td>8</td> <td>B,D</td> </tr> <tr> <td>G</td> <td>10</td> <td>F</td> </tr> <tr> <td>H</td> <td>15</td> <td>F</td> </tr> </tbody> </table> <p>Develop the project network to find out the critical path and total project duration. Calculate the total float and free float of all the activities of project.</p> | Activities | Duration days | Can start after | A | 12 | -- | B | 8 | A | C | 13 | -- | D | 7 | C | E | 8 | B, | F | 8 | B,D | G | 10 | F | H | 15 | F |
| Activities | Duration days | Can start after | | | | | | | | | | | | | | | | | | | | | | | | | | |
| A | 12 | -- | | | | | | | | | | | | | | | | | | | | | | | | | | |
| B | 8 | A | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C | 13 | -- | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D | 7 | C | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E | 8 | B, | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F | 8 | B,D | | | | | | | | | | | | | | | | | | | | | | | | | | |
| G | 10 | F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| H | 15 | F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 19. | Define forecasting. What are the steps in forecasting? | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 20. | What is economic batch quantity (EOQ)? Which factors are considered to find the same? | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21. | <p>Define following terms.</p> <p>(i) Standardization</p> <p>(ii) Simplification</p> <p>(iii) Specialization.</p> | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 22. | Discuss any one techniques of scheduling with appropriate example. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 23. | <p>Monthly sales of an item are given below.</p> <p>Calculate 3 months and 6 months moving average.</p> <table border="1"> <thead> <tr> <th>Months</th> <th>Demand</th> </tr> </thead> <tbody> <tr> <td>January</td> <td>199</td> </tr> <tr> <td>February</td> <td>202</td> </tr> <tr> <td>March</td> <td>199</td> </tr> <tr> <td>April</td> <td>208</td> </tr> <tr> <td>May</td> <td>212</td> </tr> <tr> <td>June</td> <td>194</td> </tr> <tr> <td>July</td> <td>214</td> </tr> <tr> <td>August</td> <td>220</td> </tr> <tr> <td>September</td> <td>219</td> </tr> <tr> <td>October</td> <td>234</td> </tr> </tbody> </table> | Months | Demand | January | 199 | February | 202 | March | 199 | April | 208 | May | 212 | June | 194 | July | 214 | August | 220 | September | 219 | October | 234 | | | | | |
| Months | Demand | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| January | 199 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| February | 202 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| March | 199 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| April | 208 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| May | 212 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June | 194 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| July | 214 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| August | 220 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| September | 219 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| October | 234 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | |
|-----|--|--------------------------|------|
| | November | 219 | |
| | December | 233 | |
| 24. | The sales of 'Maruti' car during a particular period have been observed: | | |
| | Year | 1990 | 1991 |
| | | 1992 | 1993 |
| | | 1994 | 1995 |
| | Sales | 200 | 220 |
| | | 210 | 230 |
| | | 250 | 320 |
| | Find the least square trend line using 1990 as base year and forecast the sales for the year 1998. | | |
| 25. | What are the basic objectives and functions of production planning and control? | | |
| 26. | Describe the factors to be analyzed during development of design of a product. | | |
| 27. | Explain steps for market research for 'Maruti 800' car. | | |
| 28. | What are the different elements of management information systems? | | |
| 29. | Discuss words 'variables' and 'attribute' in reference to quality. | | |
| 30. | Discuss different types of 'Values' and application area of value engineering. | | |
| 31. | What are the resource allocation and infrastructure facilities of entrepreneurship? | | |
| 32. | Explain steps for market research for 'Maruti 800' car. | | |
| 33. | What are the fundamental concepts of following? | | |
| | (i) | Just in time production | |
| | (ii) | Total quality management | |
| 34. | Explain 100% inspection and sampling inspection with suitable example. | | |
| 35. | Discuss normal distribution curves and its property. | | |
| 36. | Describe value engineering concepts and its procedural steps. | | |
| 37. | Differentiate between marketing concepts Vs selling concepts. | | |
| 38. | What are the different government incentives for entrepreneurs? | | |