1. 預測本身就是不準，因此應付預測不準的緣故，我們主要的對策是提高安全存量。你同意不同意？為什麼？（10分）
2. 請解釋 Order qualifier and order winner。（10分）
3. 在有限資源下，應該如何利用此有限資源才能為公司創造最高利潤？（13分）

4. 就一晶圓加工工廠如台積電、聯電，試以圖解方式說明此類工廠（a）Work-in-Process (WIP) 與 Cycle Time 的關係（b）WIP 與 Throughput 的關係。（10分）

5. 試述 Just-in-Time Production 與 Shop Floor Control 的關係。（10分）。

6. 何謂 Effectiveness？何謂 Efficiency？兩者有何區別？(7分)

7. 何謂 ISO9000？其目的為何？運作的基本觀念為何？(7分)

8. The Cool Breeze Co. produces an electric fan (model 42124). The fan is constructed by attaching an electric cord with integral switch (#4122) to an electric motor (#4123) and mounting it in a plastic base unit (#8407) to produce a motorized base (#1208). After testing the motorized base, employees attach fan blades (#1424) and a protective grill (#5509), using five screws (#123) to produce the finished fan.

Develop a product structure diagram for this problem. （10分）
9. Ten repetitions of a work task have been studied and yielded the following observed times.

<table>
<thead>
<tr>
<th>Observation Number</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>
</thead>
<tbody>
<tr>
<td>Observed Time (min.)</td>
<td>5.5</td>
<td>6.0</td>
<td>7.5</td>
<td>5.0</td>
<td>7.0</td>
<td>7.0</td>
<td>6.5</td>
<td>6.0</td>
<td>7.5</td>
<td>6.0</td>
</tr>
</tbody>
</table>

It is estimated that the rating factor is 95 percent and allowances for this task are about 15 percent of normal time.

a. What would be the normal time for this process? (6 分)
b. What would be the standard time for this process? (6 分)

10. Nu-Process Corp. manufactures molded plastic automobile trim at three locations, plants A, B, and C. Recently, it secured a large contract from a Japanese automaker. It has decided to concentrate all its production in one big new facility, Plant D.

The grid shows the locations of and production volumes at its existing plants. Use the center of gravity method and the information provided here to determine the best location for plant D. (11 分)