Answer question Q.1. AND any THREE other questions.

Each question carries a total of 25 marks.
Q.1. Table 1 contains a work breakdown structure for a systems project.

Table 1.

<table>
<thead>
<tr>
<th>Activity No</th>
<th>Activity Description</th>
<th>Duration (days)</th>
<th>Dependency Activity Nos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Specify testing requirements</td>
<td>3</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Acquire new testing platform</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Appoint testing staff</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Identify testing tools</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>Purchase required new testing tools</td>
<td>10</td>
<td>2, 4</td>
</tr>
<tr>
<td>6</td>
<td>Define test data</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>Specify test cases</td>
<td>18</td>
<td>3, 4</td>
</tr>
<tr>
<td>8</td>
<td>Install new testing tools</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>Perform testing</td>
<td>5</td>
<td>6, 7, 8</td>
</tr>
</tbody>
</table>

i. Using an appropriate network diagram, calculate the duration of this project.

ii. Indicate the critical path.

iii. Calculate the float on each non-critical activity. (25 marks)

Q.2. Project control is an essential management function of successful project management.

(a) Explain in detail what you understand by the terms project control and successful project management. (8 marks)

(b) As project manager for a large information systems project, explain how you would actively control a project in order to make certain that it does not become out of control. (12 marks)

(c) What FIVE options would you consider in order to rescue a project that is already out of control? (5 marks)
Q.3. International standards have been published which relate to the phases of the systems development life cycle.

Give an account of FIVE international standards which relate to information systems development life cycle that you would include in a project management training programme. (25 marks)

Q.4. Ludgate International Systems is a young systems development organization which has an excellent reputation for developing high quality software products. As an acknowledged specialist in software quality you have been asked to advise on the quality requirements for a new Internet-based airline reservation system.

Discuss the quality factors that you would recommend should be included in the requirements specification. (25 marks)

Q.5. (a) Explain what you understand by the terms

(i) historical records
(ii) delphi estimation
(iii) resource loading. (9 marks)

(b) Fully describe how the Constructive Cost Model (COCOMO) is used for systems project estimation purposes. (16 marks)

Q.6. Write short notes on any FIVE of the following:

i. Project teams;
ii. Software measurement;
iii. PRINCE;
iv. Configuration management;
v. Systems operations risks;
vi. Information systems project contracts. (5 x 5 marks)