B.Sc in Information Technology

YEAR 2

SUMMER EXAMINATIONS 2006

I.S. PROJECT MANAGEMENT

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3 hours

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

Each question carries a total of 25 marks.
Q.1. A work breakdown structure for a staff-training programme is illustrated in Table 1.

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>Identify staff for training</td>
<td>5</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>Review training programmes</td>
<td>6</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Establish training requirements</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>Appoint trainers</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Assemble training materials</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>Prepare training centre</td>
<td>8</td>
<td>3,4</td>
</tr>
<tr>
<td>7</td>
<td>Set examinations</td>
<td>16</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>Organise results reporting</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9</td>
<td>Perform training</td>
<td>10</td>
<td>5,6</td>
</tr>
<tr>
<td>10</td>
<td>Conduct examinations</td>
<td>5</td>
<td>7,8,9</td>
</tr>
<tr>
<td>11</td>
<td>Publish results</td>
<td>5</td>
<td>10</td>
</tr>
</tbody>
</table>

i. Draw an activity-on-node PERT diagram for the work breakdown structure shown in Table 1.

ii. List the critical activities.

iii. Calculate the project duration. (25 marks)

Q.2. (a) State why organisations engage in risk management. (5 marks)

(b) Discuss the risks that are of concern to the information systems project manager and explain how these differ from the risks that impact the operations manager. (14 marks)

(c) Discuss how the events of September 11, 2001 and the Asian tsunami of December 26, 2004, might influence the thinking of a risk manager. (6 marks)

Q.3. (a) As part of a re-structuring programme your organisation wishes to introduce a project management methodology. Explain in detail the principal components that such a methodology should include. (15 marks)

(b) As IT director and as part of the same programme you are recruiting a project manager for a new Information Systems project. Discuss the essential skills that you would require the successful candidate to possess. (10 marks)
Q.4.  
(a) In the context of a software product, explain the terms *external quality factors* and *internal quality factors.*  
(b) Explain in detail SIX software quality factors (3 external and 3 internal).  
(c) Discuss how the software quality factors that you explain in part (b) impact the systems operations manager.

Q.5.  
You are employed as an IS professional in a software company whose principal business is building bespoke software products for an established client base. One of the companies projects is currently experiencing delay and you have been asked to prepare a report for management. 

(a) Based on a suitable analysis model that you are familiar with, identify FIVE general considerations that you would investigate in order to prepare a comprehensive report.  
(b) For any THREE of the five considerations that you identify in part (a) explain in detail what you will address in your report.  
(c) Discuss FOUR options that are available to the project manager which will enable the project to be successfully completed.

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

i. Software testing;  
ii. The Project Support Office;  
iii. How Intellectual Property Rights impact the project manager;  
iv. Resource levelling;  
v. IS Project Management CASE tools;  
vi. ISO 9000 certification.