JUNE 2012 EXAMINATION

DATE: 15 JUNE 2012

TIME: 09H00 – 11H00 TOTAL: 100 MARKS

DURATION: 2 HOURS PASS MARK: 40%

(OX-98)

PROJECT MANAGEMENT TECHNIQUES

THIS EXAMINATION PAPER CONSISTS OF 3 SECTIONS:

SECTION A: CONSISTS OF:

(i) 10 MULTIPLE-CHOICE QUESTIONS (10 MARKS)
(ii) 10 TRUE OR FALSE QUESTIONS (20 MARKS)

ANSWER ALL THE QUESTIONS

SECTION B: CONSISTS OF 2 SHORT QUESTIONS

ANSWER BOTH QUESTIONS (20 MARKS)

SECTION C: CONSISTS OF 2 LONG ANSWER QUESTIONS

ANSWER BOTH QUESTIONS (50 MARKS)

INSTRUCTIONS:

1. Read the following instructions carefully before answering the paper, as failure to act upon them will result in a loss of marks.
2. Write your answers in your answer book, which is provided in the exam.
3. Ensure that your name and student number are clearly indicated on your answer book.
4. Write your answers in either blue or black ink in your answer book.
5. Read each question very carefully before you answer it and number your answers exactly as the questions are numbered.
6. Begin with the question for which you think you will get the best marks.
7. Note the mark allocations for each question – give enough facts to earn the marks allocated. Don't waste time by giving more information than required.
8. You are welcome to use diagrams to illustrate your answers.
9. Please write neatly – we cannot mark illegible handwriting.
10. Any student caught cheating will have his or her examination paper and notes confiscated. The College will take disciplinary measures to protect the integrity of these examinations.
11. If there is something wrong with or missing from your exam paper or your answer book, please inform your invigilator immediately. If you do not inform your invigilator about a problem, the College will not be able to rectify it afterwards, and your marks cannot be adjusted to allow for the problem.
12. This paper may be removed from the examination hall after the examination has taken place.

SPECIAL REQUIREMENTS: PENCIL AND RULER
SECTION A

(30 MARKS)

ANSWER ALL THE QUESTIONS

(i) MULTIPLE-CHOICE QUESTIONS

Choose the correct option for each of the following. Write only the question number and your chosen answer. For instance, if you think that the correct answer for number 1 is (a), then write it as 1. (a).

1. Motivation can be defined as:
   (a) effective leadership.
   (b) hygiene factors.
   (c) Maslow's Hierarchy of needs.
   (d) an inner force that causes somebody to be moved to do something.

2. A project team can be defined as:
   (a) a number of people who work effectively.
   (b) a number of people who work efficiently.
   (c) a number of people who work closely together to achieve a shared and common goal.
   (d) a number of people who identify and solve problems.

3. The first task of a project sponsor is to:
   (a) appoint the project manager.
   (b) provide funds for the project.
   (c) chair the handover meeting.
   (d) identify the needs and expectations of all the stakeholders.

4. Schedule changes must be communicated:
   (a) when they occur.
   (b) when the stakeholders ask for the information.
   (c) at every progress meeting.
   (d) before completing any further activities that could have a major impact on the project.

5. The document used to control the flow of information through the lines of communication is called:
   (a) a cash flow statement.
   (b) a progress report.
   (c) a transmittal note.
   (d) a hub-and-spoke document.
6. You keep track of the latest document after it has been updated by:

(a) giving it a new name.
(b) allocating a new version number.
(c) filing it in alphabetical order.
(d) filing it in the project office in a register.

7. Projects are subdivided into several stages to:

(a) determine cash flow.
(b) create checkpoints.
(c) focus on activities in a specific phase.
(d) control the duration of each phase.

8. The characteristics of an objective can be described as:

(a) SWOT.
(b) WBS.
(c) CPM.
(d) SMART.

9. The task to apply the CPM involves:

(a) developing the resource histogram.
(b) scheduling the activities on a Gantt chart.
(c) developing a network diagram to present the activities in a logical sequence of work.
(d) applying the work breakdown structure to break activities down into manageable elements.

10. The most common method used to communicate the expected and actual status of a project's activities is the:

(a) work breakdown structure.
(b) network diagram.
(c) resource histogram.
(d) Gantt chart.

(ii) TRUE OR FALSE QUESTIONS

Indicate whether the following statements are true or false. Rewrite your false answers to make them true.

1. The planning outcome of quality control should be a quality control plan.
2. The outcome of a project will be seen as successful even if the project is not completed.
3. The management by-projects approach encourages decentralised management responsibility.
4. The advantage of computerised project management systems is that it offers fast calculations on spreadsheets.
5. You would go about identifying environmental influences on a project by performing a scoping.

6. The practice where the deliverables from the preceding phase of the project life cycle are progressively approved so that the work can start in the next phase, is called fast tracking.

7. The most frequent cause of a scope change request is from a sponsor.

8. The matrix organisation structure does not encourage strong staff commitment to the project.

9. Project acceleration is the process of reducing the duration of an activity or project to meet schedule requirements.

10. In a partnership or joint venture the contractor is responsible for the project, from the design phase right through to the commissioning phase. [10 × 2 = 20]
SECTION B: SHORT QUESTIONS  (20 MARKS)

ANSWER BOTH QUESTIONS

QUESTION 1

The project charter, also called terms of reference, is a document outlining what is to be done and what the boundaries of the project are.

List the important aspects that should be included in a project charter. [10]

QUESTION 2

You are appointed as project manager for a housing development. You are experiencing a resources overload.

In order to prevent some activities from being delayed, what options would you consider to increase the resources available? [10] [20]
QUESTION 1

The following information is known about a certain project. By using a key time management technique, determine the shortest possible time it will take to complete this project.

<table>
<thead>
<tr>
<th>Preceding activity</th>
<th>Succeeding activity</th>
<th>Activity duration (days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start</td>
<td>Task 1</td>
<td>2</td>
</tr>
<tr>
<td>Task 1</td>
<td>Task 2</td>
<td>1</td>
</tr>
<tr>
<td>Task 1</td>
<td>Task 3</td>
<td>2</td>
</tr>
<tr>
<td>Task 1</td>
<td>Task 4</td>
<td>1</td>
</tr>
<tr>
<td>Task 2</td>
<td>Task 5</td>
<td>2</td>
</tr>
<tr>
<td>Task 3</td>
<td>Task 6</td>
<td>3</td>
</tr>
<tr>
<td>Task 4</td>
<td>Task 7</td>
<td>2</td>
</tr>
<tr>
<td>Task 5</td>
<td>Task 8</td>
<td>2</td>
</tr>
<tr>
<td>Task 6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Task 8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note:  
• You do not need to draw a bar chart or resource histogram.  
• Use the following activity box and calculations for the time management technique:

<table>
<thead>
<tr>
<th>ES</th>
<th>EF</th>
<th>R</th>
<th>Task no.</th>
<th>Dur</th>
<th>LS</th>
<th>LF</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
</tr>
</tbody>
</table>

EF = ES + Duration – 1  
LS = LF – Duration + 1  
F = LS – ES

You are required to do the following:  
Draw the network diagram indicating the critical path for the completion of the project in the shortest possible time. You are to establish the early start, late start, early finish and late finish for each activity.
QUESTION 2

Using the Delphi technique, a project team for a landscaping company identified the following activities that need to be completed for the current project that they are responsible for:

<table>
<thead>
<tr>
<th>Activity number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Draft a project charter</td>
</tr>
<tr>
<td>200</td>
<td>Draw Gantt Chart</td>
</tr>
<tr>
<td>300</td>
<td>Prepare premises</td>
</tr>
<tr>
<td>400</td>
<td>Conduct a close out meeting</td>
</tr>
<tr>
<td>500</td>
<td>Do a feasibility study</td>
</tr>
<tr>
<td>600</td>
<td>Create a cash flow statement</td>
</tr>
<tr>
<td>700</td>
<td>Procure plants and shrubs</td>
</tr>
<tr>
<td>800</td>
<td>Inspect and rectify problems</td>
</tr>
<tr>
<td>900</td>
<td>Prioritise stakeholders</td>
</tr>
<tr>
<td>101</td>
<td>Apply the CPM</td>
</tr>
<tr>
<td>201</td>
<td>Complete landscaping</td>
</tr>
<tr>
<td>301</td>
<td>Hand over irrigation procedure</td>
</tr>
</tbody>
</table>

(a) You are required to assist the team in the next step of the planning process by indicating the following in a table format:

- the phases in which the activities should be performed; and
- what the required input and output of each phase should be.

Use the following suggested format for the table:

<table>
<thead>
<tr>
<th>Phase</th>
<th>Phase</th>
<th>Phase</th>
<th>Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>Input</td>
<td>Input</td>
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<tr>
<td>Process</td>
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<tr>
<td>Output</td>
<td>Output</td>
<td>Output</td>
<td>Output</td>
</tr>
</tbody>
</table>

(20)

(b) Also advise the project team on what method they should apply to shorten the duration of the project and give them an example using two or more of the above activities.

(5) [25]

Section A: 30 marks
Section B: 20 marks
Section C: 50 marks
TOTAL: 100 MARKS