NOVEMBER 2012 EXAMINATION

DATE: 16 NOVEMBER 2012

TIME: 09H00 – 11H00 TOTAL: 100 MARKS

DURATION: 2 HOURS PASS MARK: 40%

(OX-98)

PROJECT MANAGEMENT TECHNIQUES

THI S 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.

Examiner: V Erasmus
(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. One of the main components of the risk management model:
   
   (a) offer effective leadership  
   (b) attend to hygiene factors  
   (c) look for sponsors  
   (d) define objectives

2. General rule of meetings:
   
   (a) should be attended by team members  
   (b) should begin and end on time  
   (c) should work towards a common goal  
   (d) should solve problems

3. Types of project meetings are:
   
   (a) cause and effect meetings.  
   (b) financial meetings.  
   (c) handover and close-out meetings.  
   (d) procurement and budget meetings.

4. A leadership style that you can apply in decision making:
   
   (a) laissez-faire  
   (b) developmental  
   (c) independent  
   (d) performance based

5. A potential problem in performance evaluation:
   
   (a) remuneration  
   (b) conflicting purpose and role  
   (c) bad management style  
   (d) motivation of team members

6. The team develops through:
   
   (a) orientation, cohesion and interdependency.  
   (b) personality, social interaction and friendliness.  
   (c) autonomy, self-sufficiency and dependence.  
   (d) integration, assimilation and adaptation.
7. The objective of a quality circle:
   (a) to focus on activities in a specific phase
   (b) to form a closer relationship with sponsors
   (c) to improve communication between all parties in the same product line
   (d) to control the duration of each phase

8. PERT is:
   (a) a method used for planning and controlling activities in a project.
   (b) a method used to calculate estimated expenses in a project.
   (c) a method used to estimate the time duration of an activity.
   (d) a method used to do costing or operational estimating.

9. The TOR document outlines:
   (a) the list of suppliers.
   (b) the expenditure of the project.
   (c) what the project is meant to achieve.
   (d) all the minor activities in a project.

10. The SWOT analysis will provide you with the means to identify elements of:
    (a) pressures and coercion.
    (b) incentives and motivation.
    (c) accountability and responsibility.
    (d) strengths and weaknesses. [10]

(ii) True or False Questions

Choose whether the following are True or False. Motivate all your answers.

1. The role of the project manager will not be covered in the TOR document.

2. Activities in a project are generally common and repetitive.

3. Project planners are reluctant to show float as it is human nature for people to delay work to their late finish making all the activities critical.

4. A resource overload is when the resource forecast is lower than the available resources.

5. Procurement management deals with acquiring all the goods and services required to perform and complete the project's scope of work.

6. The two items of information that are required to identify a logical relationship between activities are a list of activities and logical constraints.

7. The CPM, the PERT and the network diagram techniques are associated with the total planning process of a project.
8. The 'Predecessor activities' are those activities that can commence before other specific activities are completed.

9. Project procurement management focuses the project team on acquiring an inventory of all resources in the project.

10. Four types of responses that you can have to elements of risk are: eliminate, mitigate, deflect and accept. [10 × 2 = 20]
SECTION B: SHORT QUESTIONS (20 MARKS)

ANSWER BOTH QUESTIONS

QUESTION 1

(a) Briefly describe the evaluation matrix. (5)

(b) Briefly describe the sequence you will follow when making a decision on the type of response to the elements of risk. (5) [10]

QUESTION 2

(a) List three ways of deflecting risk. (3)

(b) Name the typical phases that are generic to all projects. (4)

(c) Explain the meaning of fast tracking and identify its purpose. (3) [10]

[20]
SECTION C: LONG ANSWER QUESTIONS

(50 MARKS)

ANSWER BOTH QUESTIONS

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>A</td>
<td>3</td>
</tr>
<tr>
<td>A</td>
<td>B</td>
<td>5</td>
</tr>
<tr>
<td>A</td>
<td>C</td>
<td>2</td>
</tr>
<tr>
<td>A</td>
<td>D</td>
<td>2</td>
</tr>
<tr>
<td>B</td>
<td>E</td>
<td>1</td>
</tr>
<tr>
<td>C</td>
<td>F</td>
<td>6</td>
</tr>
<tr>
<td>D</td>
<td>G</td>
<td>3</td>
</tr>
<tr>
<td>E</td>
<td>H</td>
<td>1</td>
</tr>
<tr>
<td>F</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>Finish</td>
<td></td>
</tr>
</tbody>
</table>

Apply the critical path method

**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>R</th>
<th>LS</th>
<th>EF</th>
<th>LF</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Task no.</td>
<td>Dur</td>
<td>EF = ES + Duration – 1</td>
<td></td>
</tr>
<tr>
<td>LS</td>
<td></td>
<td></td>
<td>LS = LF – Duration + 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>F = LS – ES</td>
<td></td>
</tr>
</tbody>
</table>

[25]
QUESTION 2

You are the project manager at ABC Properties, a company whose income is derived from the development and building of housing complexes in a secure environment. The company, using the work breakdown structure, identified the following activities for the project:

<table>
<thead>
<tr>
<th>Activity number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>Develop project proposal</td>
</tr>
<tr>
<td>200</td>
<td>Develop detail schedules</td>
</tr>
<tr>
<td>300</td>
<td>Award contracts</td>
</tr>
<tr>
<td>400</td>
<td>Produce operations manuals</td>
</tr>
<tr>
<td>500</td>
<td>Perform a viability study</td>
</tr>
<tr>
<td>600</td>
<td>Do a WBS</td>
</tr>
<tr>
<td>700</td>
<td>Procure equipment and services</td>
</tr>
<tr>
<td>800</td>
<td>Inspect and rectify problems</td>
</tr>
<tr>
<td>900</td>
<td>Identify stakeholders</td>
</tr>
<tr>
<td>101</td>
<td>Draw a network diagram</td>
</tr>
<tr>
<td>201</td>
<td>Develop golf course</td>
</tr>
<tr>
<td>301</td>
<td>Train users/client</td>
</tr>
</tbody>
</table>

(a) To increase the management and control of the project, ABC Properties requires that you indicate 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>
<td>Input</td>
</tr>
</tbody>
</table>

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

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

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