THE KENYA POLYTECHNIC UNIVERSITY
COLLEGE
DEPARTMENT OF SURVEYING & MAPPING
HIGHER DIPLOMA IN LAND SURVEY
END OF YEAR I EXAMINATIONS
NOVEMBER 2007
INFORMATION TECHNOLOGY & ENTREPRENEURSHIP
EDUCATION
3 HOURS

INSTRUCTIONS TO CANDIDATES:
You should have the following for this examination:

Answer booklet
Scientific calculator

This paper consists of TWO sections, A and B.
Answer THREE questions from section A and TWO questions from section B.

All questions carry equal marks and the maximum marks for each part of a question are as shown.

This paper consists of 3 printed pages.

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SECTION A: INFORMATION TECHNOLOGY

Answer any THREE questions from this section.

1. (a) List THREE categories of data collection methods. (3 marks)
   (b) Describe briefly the following data processing modes:
      (i) Online  (ii) Distributed
      (iii) Real time  (iv) Batch
      (v) Interactive (20 marks)
   (c) Outline any TWO computer input devices. (2 marks)

2. (a) List the stages of systems development. (9 marks)
   (b) Outline the aims of feasibility study stage in systems development. (16 marks)

3. (a) Describe the following data processing modes:
      (i) Synchronous  (ii) Asynchronous (5 marks)
   (b) Discuss the following terms used in networking communication:
      (i) Half duplex  (ii) Duplex
      (iii) Parallel  (iv) Serial (20 marks)

4. (a) Describe an expert system. (20 marks)
   (b) List FIVE applications of expert systems. (5 marks)

5. (a) List any FIVE operating systems. (5 marks)
   (b) Outline THREE network topologies. (9 marks)
   (c) List any FIVE applications of networking. (5 marks)
   (d) Explain how information would be sent between two devices that are 500km apart over an analogue network. (6 marks)

SECTION B: ENTREPRENEURSHIP EDUCATION

Answer any TWO questions from this section.

6. (a) Discuss the factors influencing the growth of the small Enterprise sector in Kenya. (12 marks)
   (b) What are the disadvantages of borrowing money from commercial banks? (8 marks)
7. (a) (i) What is a project? (2 marks)
   (ii) Using a diagram explain the four phases of a project. (8 marks)
(b) Describe personal traits entrepreneurs require for effective networking and interpersonal relationships. (10 marks)

8. (a) Advise a small business owner on the importance of record keeping. (10 marks)
(b) From the following information prepare a trading, Profit and Loss account for ABC company for the period ending 30th June, 2007. (12 marks)

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount (Kshs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital</td>
<td>1,800,000</td>
</tr>
<tr>
<td>Motor vehicle</td>
<td>500,000</td>
</tr>
<tr>
<td>Sales</td>
<td>900,000</td>
</tr>
<tr>
<td>Purchases</td>
<td>650,000</td>
</tr>
<tr>
<td>Opening stock</td>
<td>50,000</td>
</tr>
<tr>
<td>Advertising</td>
<td>19,000</td>
</tr>
<tr>
<td>Accrued expenses</td>
<td>5,000</td>
</tr>
<tr>
<td>Salaries and wages</td>
<td>20,000</td>
</tr>
<tr>
<td>Water</td>
<td>1,000</td>
</tr>
<tr>
<td>Lighting</td>
<td>2,500</td>
</tr>
<tr>
<td>Transport</td>
<td>4,000</td>
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<tr>
<td>Interest on loan</td>
<td>3,500</td>
</tr>
<tr>
<td>IDB loan</td>
<td>350,000</td>
</tr>
<tr>
<td>Bank overdraft</td>
<td>15,000</td>
</tr>
<tr>
<td>Purchases returns</td>
<td>15,000</td>
</tr>
</tbody>
</table>

Stock as at 30th June, 2007 was worth shs.20,000. KRA demands 30% tax on income.