EXAMINATIONS COUNCIL OF ZAMBIA

Joint Examination for the School Certificate and General Certificate of Education Ordinary Level

COMPUTER STUDIES 7010/1

Tuesday 21 OCTOBER 2014

Candidates answer on the question paper
No additional materials are required

TIME: 2 hours 30 minutes

INSTRUCTIONS TO CANDIDATES

Write your name, centre number and candidate number in the spaces at the top of this page.
There are 13 questions in this paper. Answer all questions.
Write your answers in the spaces provided on the question paper.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets [ ] at the end of each question or part question.
Cell phones are not allowed in the Examination Room.

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This question paper consists of 10 printed pages.
1. Explain the meaning of the following computer terms, giving examples where necessary.
   (a) Keyboard
   (b) Live Data
   (c) E-learning
   (d) End-user
   (e) Pilot changeover
   (f) Cyber crime

2. Gamma Supermarket has decided to change from manual (paper) based system to a computerised system.
   (a) Give three tasks that are carried out during the analysis stage.
      1
      2
      3
   (b) State one disadvantage to the supermarket of changing to a computerised system.
   (c) Suggest a suitable method the supermarket can use to change over to the new system. Give a reason for your answer.
      Method
      Reason
3 A car manufacturing company uses a website to advertise its products. Customers can find information about this website using a search engine.

(a) Give two advantages of using a search engine to find products on the company's website.

1 ............................................................................................................. [1]

2 ............................................................................................................. [1]

(b) Customers who visit the company website can also make orders on-line. Give one advantage and one disadvantage of on-line orders to the customer.

Advantage ......................................................................................................... [1]

Disadvantage ...................................................................................................... [1]

(c) Give two ways the company can protect the data for its customers when they make orders online.

1 ............................................................................................................. [1]

2 ............................................................................................................. [1]

4 Engineers and teachers of industrial arts subjects use Computer Aided Designs (CAD) software in their works.

(a) Give three characteristics of a Computer Aided Design (CAD) package.

1 ............................................................................................................. [1]

2 ............................................................................................................. [1]

3 ............................................................................................................. [1]

(b) Give two uses of CAD software.

1 ............................................................................................................. [1]

2 ............................................................................................................. [1]

(c) State three examples of hardware required for a CAD system.

1 ............................................................................................................. [1]

2 ............................................................................................................. [1]

3 ............................................................................................................. [1]

(d) Describe one situation where CAD software is used apart from construction design.

www.zedpastpapers.com ............................................................................... [1]
5 (a) Match the definitions on the left to the correct term on the right using arrows.

- Check if student age is in the range 11 to 12 → Verification
- Computer generated operation of a chemical process → Validation
- Software that looks for information based on certain keywords → Search Engine
- Typing in a password twice to ensure it is correct → Simulation

(b) State one application which uses

(i) Real-time processing

(ii) On-line processing

(c) Give the difference between a Real-time processing system and an on-line processing system.

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6 (a) The Systems flowchart represents a batch update of a payroll master file stored on magnetic tape. Use the words provided to fill in the missing information. Write your answers in the blank spaces.

Validated transactions file

Sorted Validated Transaction File
Old Master File
Update
Error Report
Sort

New master file

(b) Describe the consequences of system failure of a real-time air traffic control system.

7 (a) Give two examples of situations where data can be collected using sensors.

1

2

(b) Most cell phones are fitted with digital camera called a webcam. Give two uses of this camera on the phone.

1

2
Besa and company use a spreadsheet program to monitor the sales of fuel at their filling station. Study the diagram below and answer the questions that follow.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>FUEL</td>
<td>OPENING STOCK</td>
<td>NEW STOCK</td>
<td>CLOSING STOCK</td>
<td>STOCK SOLD</td>
<td>COST PER LITRE</td>
<td>TOTAL AMOUNT (K)</td>
</tr>
<tr>
<td>2</td>
<td>Engine oil</td>
<td>1 500</td>
<td>5 000</td>
<td>3 500</td>
<td></td>
<td>8.16</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Kerosene</td>
<td>4 200</td>
<td>20 000</td>
<td>8 700</td>
<td></td>
<td>3.52</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Diesel</td>
<td>15 300</td>
<td>70 000</td>
<td>33 900</td>
<td></td>
<td>7.62</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Petrol</td>
<td>20 500</td>
<td>3 400</td>
<td>10 100</td>
<td></td>
<td>9.42</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>TOTAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(a) Write the data type contained in cell F2.

........................................................................................................................................... [1]

(b) Write the formula that needs to be placed in cell E2 to calculate the STOCK SOLD for engine oil.

........................................................................................................................................... [2]

(c) Write the formula that needs to be placed in cell G2 to calculate the TOTAL AMOUNT sold for Engine oil.

........................................................................................................................................... [2]

(d) Explain how the company can create a pie chart using the columns headed FUEL and TOTAL AMOUNT (K).

........................................................................................................................................... [2]

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9. Many schools are networking their computers.

(a) (i) Give three advantages of networking a set of computers.

1. ................................................................................... [1]
2. ................................................................................... [1]
3. ................................................................................... [1]

(ii) Give one reason why viruses can spread quickly on a network. ................................................................................... [1]

(b) One secondary school has decided to use network computers with wireless capability. Give two advantages and two disadvantages of using wireless systems.

Advantages

1. ................................................................................... [1]
2. ................................................................................... [1]

Disadvantages

1. ................................................................................... [1]
2. ................................................................................... [1]

(c) At another school, the network specialist has decided to upload the teaching and learning materials on the internet rather than printing a series of hard copies. Give two reasons why the specialist has chosen to do this.

1. ................................................................................... [1]
2. ................................................................................... [1]
A college offers courses which students access on an on-line system. Students log on to the system from their homes to choose their courses. In order to get enrolled for a course, a student needs to complete an on-line application form which includes the student's name, address, telephone number, e-mail address and the course name.

**STUDENT APPLICATION FORM**

<table>
<thead>
<tr>
<th>Student's Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
</tr>
<tr>
<td>Telephone Number</td>
</tr>
<tr>
<td>Email</td>
</tr>
<tr>
<td>Course</td>
</tr>
</tbody>
</table>

**Submit**  **Reset**

(a) Give one example of an application software that can be used for this purpose apart from Database Management software.  
.............................................................................................................................. [2]

(b) State two other features that can be added to this form.

1 ...................................................................................................................... [1]

2 ...................................................................................................................... [1]

(c) State one reason why the COURSE field has a pull down menu.

.............................................................................................................................. [1]

(d) List two other fields that can be added to the form.

1 ...................................................................................................................... [1]

2 ...................................................................................................................... [1]

(e) What is the purpose of the Reset button on the form?

.............................................................................................................................. [1]

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11 In a school chemistry laboratory, a teacher uses a multimedia system to present a lesson to a group of pupils.

(a) State any two important features of a multimedia system which distinguishes it from an ordinary computer system.

1 ........................................................................................................................................... [1]

2 ........................................................................................................................................... [1]

(b) Give one suitable hardware device apart from the computer and one application software that can be used to present a lesson in multimedia format.

Hardware device ..................................................................................................................... [1]

Application software .............................................................................................................. [1]

(c) Give two reasons why multimedia systems are becoming popular in presenting scientific experiments.

1 ........................................................................................................................................... [1]

........................................................................................................................................... [1]

2 ........................................................................................................................................... [1]

........................................................................................................................................... [1]

12 Mabutulusi is an IT expert of a newly opened bank. He suggested to management the introduction of Automated Teller Machines (ATMs).

(a) State two reasons why Mabutulusi recommended ATM machines.

1 ........................................................................................................................................... [1]

........................................................................................................................................... [1]

2 ........................................................................................................................................... [1]

........................................................................................................................................... [1]

(b) State the input, processing and output that takes place on an ATM terminal.

Input ........................................................................................................................................ [1]

Processing ................................................................................................................................ [1]

Output .................................................................................................................................... [1]

(c) State two security features of an ATM facility.

1 ........................................................................................................................................... [1]

........................................................................................................................................... [1]

2 ........................................................................................................................................... [1]
13 In the near future, most of the work done by human beings will be taken over by robots.

(a) Give **two** advantages and **two** disadvantages of using robots.

   **Advantages**
   
   1 .................................................................................................................. [1]
   2 .................................................................................................................. [1]

   **Disadvantages**
   
   1 .................................................................................................................. [1]
   2 .................................................................................................................. [1]

(b) State **two** typical scientific industrial applications of robots.

   1 .................................................................................................................. [1]
   2 .................................................................................................................. [1]

(c) Give **two** major differences between a human being and a robot in performing tasks.

   1 .................................................................................................................. [2]
   2 .................................................................................................................. [2]

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