



CICT PART I SECTION 1

INTRODUCTION TO COMPUTING

MONDAY: 21 May 2018.

Time Allowed: 3 hours.

Answer ALL questions. Marks allocated to each question are shown at the end of the question.

**QUESTION ONE**

- (a) Explain the following terms as used in cloud computing:
- (i) XaaS. (2 marks)
  - (ii) SaaS. (2 marks)
- (b) (i) Describe a “concept keyboard” as used in computing. (2 marks)
- (ii) Cite one application of concept keyboard in a business. (1 mark)
- (c) Describe five characteristics of a good computer network. (5 marks)
- (d) Explain the following terms as used in information communication technology:
- (i) Bitmap. (2 marks)
  - (ii) Program. (2 marks)
  - (iii) GIGO. (2 marks)
  - (iv) WYSIWYG. (2 marks)

(Total: 20 marks)

**QUESTION TWO**

- (a) Distinguish between the following terms as used in computer storage:
- (i) “PROM” and “EPROM”. (4 marks)
  - (ii) “DVD” and “Blue Ray Disc”. (4 marks)
- (b) You have a colleague who is visually impaired. He is interested in using a computer. Recommend three devices that he could use. (3 marks)
- (c) While working on your computer, your monitor displays the following message:  
BIOS Error – failed to overclock.
- Required:**  
Explain three causes of the above error. (3 marks)
- (d) The managers of Jaribu Company Ltd. are considering installing a computer network in the organisation. The managers are carrying out an assessment of the costs associated with the network.
- Required:**  
Advise the management of Jaribu Company Ltd. on six costs they might incur over the entire life cycle of the network. (6 marks)

(Total: 20 marks)

**QUESTION THREE**

- (a) Outline four steps of uninstalling a computer program. (4 marks)
  - (b) (i) Convert  $2015_8$  to base 16. (2 marks)
  - (ii) Convert  $1011011_2$  to octal. (2 marks)
  - (iii) Calculate the following, giving the sum in denary:  
 $301_8 + 1001101_2$  (4 marks)
  - (c) Identify two activities that are supported by each of the following system utilities:
    - (i) File manipulation. (2 marks)
    - (ii) Status information. (2 marks)
    - (iii) File modification. (2 marks)
    - (iv) Communication. (2 marks)
- (Total: 20 marks)**

**QUESTION FOUR**

- (a) (i) Explain the term "wiki" as used in information communication technology. (2 marks)
  - (ii) List three types of wiki. (3 marks)
  - (b) A digit circuit has four inputs D, C, B, A representing the binary values 0000 to 1111 (0 to 15 decimal). The output F is true if the input falls in the range 8 to 10 (inclusive), or if the input is divisible by 3, or if the input is divisible by 7 otherwise it is false. Zero is considered as indivisible by 3 or 7.  
**Required:**  
Construct a truth table for this system. (5 marks)
  - (c) Suggest four poor environmental conditions that an employee might encounter in a computer work station. (4 marks)
  - (d) You are a consultant in an information communication technology (ICT) consultancy company. A client approached you in the following situation:  
  
He runs a publishing company and has been outsourcing the computerised publishing operation. He now wants to computerise the publishing process. He has acquired the necessary hardware.  
**Required:**  
Citing an example in each case, list three types of software he might purchase for the publishing operation. (6 marks)
- (Total: 20 marks)**

**QUESTION FIVE**

- (a) Identify four special keys in a QWERTY keyboard. (4 marks)
  - (b) Highlight five validation checks performed during data entry. (5 marks)
  - (c) Assess five methods used to attack computer passwords. (5 marks)
  - (d) Outline a six-step procedure for updating computer BIOS without using the operating system. (6 marks)
- (Total: 20 marks)**
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