




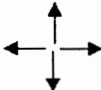
**CICT PART I SECTION I**  
**INTRODUCTION TO COMPUTING**

**MONDAY: 17 May 2021.**

**Time Allowed: 3 hours.**

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

**QUESTION ONE**

- (a) Explain three circumstances under which data might be lost from a backup storage. (6 marks)
- (b) Explain the following terms as used in computer networking:
- (i) Trunking. (2 marks)
  - (ii) IoT. (2 marks)
  - (iii) WWW. (2 marks)
- (c) Describe the following types of software installers:
- (i) Network installers. (2 marks)
  - (ii) Silent installers. (2 marks)
- (d) State the role of the following keys on the keyboard of a computer:
- (i) F1. (1 mark)
  - (ii) ESC. (1 mark)
  - (iii)  (1 mark)
  - (iv)  (1 mark)
- (Total: 20 marks)**

**QUESTION TWO**

- (a) (i) List the numbers included in the following number systems:
- Hexadecimal. (2 marks)
  - Octal. (2 marks)
- (ii) Convert  $276_{10}$  into binary. (2 marks)
- (iii) Add  $110011_2$  to  $1101_2$  (2 marks)
- (b) Specify six data validation methods used during data processing. (6 marks)
- (c) Represent the following statements into logic gates/circuits:
- (i) A and B (2 marks)
  - (ii) A.B (2 marks)
  - (iii) NOT A (2 marks)

**(Total: 20 marks)**

**QUESTION THREE**

- (a) Outline three settings that are stored in complementary metal oxide semiconductor (CMOS) memory chip. (3 marks)
  - (b) (i) Explain briefly two internet abuses by users. (4 marks)  
(ii) Evaluate four ways that internet users could keep themselves safe and secure. (4 marks)
  - (c) There is a growing concern associated with Information Communication Technology (ICT). Analyse five of these concerns. (5 marks)
  - (d) Explain the use of the following computer files:
    - (i) Sort file. (1 mark)
    - (ii) Reference file. (1 mark)
    - (iii) Report file. (1 mark)
    - (iv) Transaction file. (1 mark)
- (Total: 20 marks)**

**QUESTION FOUR**

- (a) Indicate two characteristics of cache memory. (2 marks)
  - (b) Using examples, differentiate between a software update and a software upgrade. (4 marks)
  - (c) A logic circuit has four binary inputs; A, B, C, D that represent the sixteen values 0(0000) to 15(1111). The output F is true if the input on A, B, C, D is divisible by 3, 8, 13 or 14 respectively. Note that 0 is not divisible by any number.  
Draw a truth table for this system with inputs A, B, C, D and output F. (7 marks)
  - (d) (i) Explain the term "safe mode" in Windows Operating System. (1 mark)  
(ii) State the purpose of starting your computer in safe mode. (2 marks)
  - (e) Explain four ways in which law enforcement agencies could use computers to improve their services. (4 marks)
- (Total: 20 marks)**

**QUESTION FIVE**

- (a) (i) Giving an example in each case, differentiate between deterministic and stochastic system in the context of computer systems. (4 marks)  
(ii) Examine the relevance of general systems theory in the study of business information system. (4 marks)
  - (b) State the four features of a Unicode that makes it suitable for a coding scheme. (4 marks)
  - (c) Your organisation has recruited new data entry clerks. Your head of department has directed you to go and advise the new employees on how to prevent computer-related muscle and joint injuries.  
Enumerate four tips that you would give to the new employees. (4 marks)
  - (d) Outline four challenges associated with setting up a computer network using a ring topology. (4 marks)
- (Total: 20 marks)**
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