KASNEB

CICT PART I SECTION 1

INTRODUCTION TO COMPUTING

FRIDAY: 20 November 2015.   **Time Allowed: 3 hours.**

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

QUESTION ONE

(a) (i) Convert 321_8 to its binary equivalent.   (2 marks)

(ii) Subtract 1100_2 from 10011_2.   (2 marks)

(iii) Using two's complement, calculate:

$27_{10} - 5_{10}$ in binary system.   (3 marks)

(b) Differentiate the following terms:

(i) "Data" and "information".   (2 marks)

(ii) "Program" and "software".   (2 marks)

(c) Citing an example of areas where they are used, describe three scanning input devices.   (9 marks)
                                                                                      (Total: 20 marks)

QUESTION TWO

As the information communication technician in your organisation, you have been charged with the responsibility of implementing information communication technology facilities including hardware and software.

Required:

(a) Define the term "operating system".   (2 marks)

(b) Describe five functions of an operating system.   (10 marks)

(c) Discuss four factors that you would consider when selecting an operating system for the organisation.   (8 marks)
                                                                                      (Total: 20 marks)

QUESTION THREE

(a) Explain the following characteristics of a computer file:

(i) Volatility.   (2 marks)

(ii) Growth.   (2 marks)

(b) Mary has a computer which is currently installed with Microsoft windows XP. She would like to migrate to windows 10.

Required:
Describe two installation methods that could be used when performing the migration from windows XP to windows 10.
                                                                                      (6 marks)

(c) Upon assembling her computer for the first time, Martha received a POST error message indicating that power had to be turned off from the system.

Clearly guide her on the troubleshooting routine to help her diagnose the possible defects or faults resulting in the error message.   (10 marks)
                                                                                      (Total: 20 marks)

QUESTION FOUR

(a)   The Internet provides opportunities galore, and can be used for a variety of things.

      Required: (10 marks)

      (i)   Discuss five uses of the Internet.

                           (6 marks)

      (ii)   Explain three disadvantages of the Internet.

(b)   Citing an example in each case, explain the following types of application software:

                           (2 marks)

      (i)   Personal information manager.

                           (2 marks)

      (ii)   Project management software.   **(Total: 20 marks)**

QUESTION FIVE

(a)   Write truth tables for the following:

                           (4 marks)

      (i)   Conditional "if………then".

                           (4 marks)

      (ii) $P \lor (p \land q)$ statement.

                           (6 marks)

(b)   Summarise three reasons why you might require to dual-boot your computer.

(c)   Differentiate between the following computer printing concepts:

                           (2 marks)

      (i)   "Impact" and "non-impact" printers.

                           (2 marks)

      (ii)   "Dot-matrix" and "line" printers.

                           (2 marks)

      (iii) "Laser" and "thermal" printers.   **(Total: 20 marks)**

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