



KIBABII UNIVERSITY COLLEGE

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UNIVERSITY REGULAR EXAMINATIONS

2013/2014 ACADEMIC YEAR

1ST YEAR SEMESTER EXAMINATION

**FOR THE DEGREE OF
BACHELOR OF: EDUCATION ARTS, CRIMINOLOGY & COMMERCE**

(SCHOOL – BASED)

COURSE CODE: CSC 110

COURSE TITLE: COMPUTER FUNDAMENTALS

DATE: 21ST AUGUST, 2014

TIME: 2:00P.M.-5:00P.M.

INSTRUCTIONS TO CANDIDATES

- Answer questions one and any two questions only
- Question one carries 30 marks and the other questions carry 20 marks each.

QUESTION ONE

- (a) Explain carefully the term computer (2 marks)
- (b) In what general ways can computers aid the school management (4 marks)
- (c) State and briefly explain any FOUR main areas of computer application (4 marks)
- (d) A small Business computer, having a keyboard, screen, processor and printer, processes the company payroll. Using example distinguish between :
 - (i) Programs and Data
 - (ii) System software and application software (4 marks)
- (e) State any FOUR early devices used before the invention of the first computer (2 marks)
- (f) Explain briefly the first Three computer generations. (6 marks)
- (g) Perform the following conversions:
 - A: $11001101_{(2)}$ to decimal (base 10)
 - B: $340_{(10)}$ to binary (base 2) (4 marks)
- (h) Briefly explain the function of a modem in data communication. (4 marks)

QUESTION TWO

- (a) Briefly explain the following types of networks
 - (i) WAN
 - (ii) MAN
 - (iii) LAN (9 marks)
- (b) Given an email address john@hotmail.com, explain the components of this email address. (4 marks)
- (c) What services does the internet offer to the modern society and the globe. (4 marks)
- (d) Name the components of the central processing unit (CPU) and describe briefly the function of each. (3 marks)

QUESTION THREE

- (a) Convert the binary integer 110110100 into decimal. (3 marks)
- (b) Convert the decimal integer 326 into:
 - (1) Binary
 - (2) Octal
 - (3) Hexadecimal
- (c) Define the term software. (2 marks)
- (d) With examples, distinguish between application software and system software. (6 marks)

QUESTION FOUR

- (a) Draw a block diagram to show the hardware components of a typical computer system, including the backing store. (Show the organization, but do not draw pictures of printers, mice,...). Include the data and control paths on the diagram. (10 marks)
- (b) A small computer system is used to update payroll files. Explain the following:

- (1) When the computer is switched off, the backing store contains programs and data, but the main memory is empty.
- (2) When the computer is in use, the main memory must contain at least one program and some data.
- (3) Before the computer is switched off, it is usually necessary to ensure data is written to backing store, but the payroll programs need not be written from main memory to backing store. (10 marks)

QUESTION FIVE

- (a) Distinguish between hardcopy and softcopy giving any two examples of devices in each case. (6 marks)
- (b) Various forms of document reading are available, for example;
 - (1) MICR
 - (2) OMR
 - (3) OCR

For any TWO of these methods;

- (a) Describe the principle by which a document is read.
- (b) Describe briefly an application, showing the type of document and data which may be read into the computer.
- (c) Suggest one advantage and one disadvantage of each method of input (14 marks)