KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS
2020/2021 ACADEMIC YEAR

END OF SEMESTER EXAMINATIONS
YEAR ONE SEMESTER ONE EXAMINATIONS

FOR ALL FIRST YEAR STUDENTS – JAN INTAKE

COURSE CODE : **KUC 112**

COURSE TITLE : **FUNDAMENTALS OF COMPUTING**

DATE: TUESDAY 18ᵀᴴ , 2021 **TIME:** 8.00 A.M – 10.00 A.M
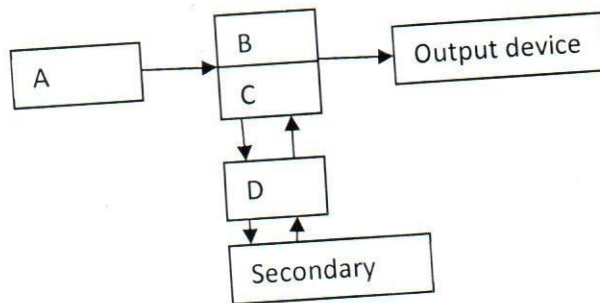
INSTRUCTIONS TO CANDIDATES

ANSWER QUESTION ONE AND ANY OTHER TWO.

QUESTION ONE [COMPULSORY] [30 MARKS]

a) Define a local area network. [1 mk]

b) State two types of computer output devices giving relevant examples of each. [2 mks]

c) State any three functions of the central processing unit (CPU). [3 mks]

d) Explain the difference between:-

   i. A system software and application programs [2 mks]

   ii. Analogue and digital computers. [2 mks]

   iii. RAM and ROM [2 mks]

e) Subtract 0111_2 from 1001_2 [2 mks]

f) Name any three data presentation code used in computers. [3 mks]

g) Convert the hexadecimal number FCI to its binary equivalent [4 mks]

h) List any precautions that can be taken to protect data stored in flash disk [2 mks]

i) Programs can be purchased from computer stores on CD-ROM. Explain any two reasons why CD-ROMs are preferred over other storage medium like floppy or flash disks. [2 mks]

j) The diagram below represents the essential features of a computer system. Study the diagram and answer the questions that follow:

   i. Name the component labeled C and D [2 mks]

   ii. Name three types of buses in computer system [3 mks]

QUESTION TWO [20 MARKS]

a) Kibabii University is in the process of purchasing new application software. List four items that the university should confirm to be accompanying the application software

[4 mks]

b) What is a computer network topology? [1 mk]

c) Convert each of the following from binary to decimal number
   i) 1010101 [3 mks]

d) Virus is a software code that is deliberately created by an attacker. Viruses may collect sensitive information or may alter or destroy information. Explain four ways of protecting the computers from viruses. [4 mks]

e) Highlight three disadvantages of computers [3 mks]

f) Explain THREE Disadvantages of Hard Disks [3 mks]

g) Compare the 2nd and 3rd generation computers in terms of technology and type of memory used. [2 mks]

QUESTION THREE [20 MARKS]

Use the following narrative to answer a, b, c, d and e

Kibabii School has bought a computer system. The hardware items supplied with it include : 1.3 GHZ processor, 512 MB of RAM, a sound card, speaker, a monitor a keyboard, 200 GB hard disk, floppy disk drive, a CD-Read/Write drive, a mouse, a modem, a dot matrix printer and a joystick. The software supplied include: an operating system, a high level programming language interpreter and the following packages: graphics, word processor, publisher, database, games and spreadsheets.

a) List three input devices from the given specifications [3 mks]

b) The computer teacher at the school complained that a laser printer should have been supplied instead of a dot matrix printer. Explain any four differences between the two types of printers. [4 mks]

c) Some of the students in the school use the computer to do homework. Name the packages used to:
   i. Do calculation and drawing graphs [1 mk]
   ii. Write an essay [1 mk]

d) Students enjoy playing noisy computer games.

     i.   Which two hardware items are needed to produce sound? [2 mks]

    ii.   Which input device is only used for playing games [1 mks]

e) Name any two secondary storage devices likely to be used by the computer systems justifying your answer [2 mks]

f) Describe two network topologies [4 mks]

g) Distinguish between desktop operating system and network operating system [2 mks]

QUESTION FOUR [20 MARKS]

a) Give any two differences between high and low level programming languages [2 mks]

b) Convert to

    i. 91B to octal [3 mks]

    ii. 376 to hexadecimal [3 mks]

    iii. 9 to binary [3 mks]

c) List and explain types of computers based on size, memory capacity. [6 mks]

d) Write short notes on cache memory. [3 mks]

QUESTION FIVE [20 MARKS]

a) State and explain three functions of operating system? [6 mks]

b) Describe the Boot-Up process of a computer [4 mks]

c) What do you understand by disk formatting? [3 mks]

d) Identify **three** health hazards associated with the use of computers in an organization [3 mks]

e) Describe the BIOS routines and functions [4 mks]