



MASENO UNIVERSITY
UNIVERSITY EXAMINATIONS 2015/2016

**FIRST YEAR FIRST SEMESTER EXAMINATION FOR THE DEGREE OF
BACHELOR OF EDUCATION WITH INFORMATION TECHNOLOGY**

HOMABAY CAMPUS – SCHOOL BASED

UCI 101: FUNDAMENTALS OF IT

Date: 21st December, 2015

Time: 11.00 - 1.00pm

INSTRUCTIONS:

- Answer Question ONE and any other TWO Questions.
- Start a new question on a new page.

Question i to x: Answer TRUE or FALSE

- i. All computers are systems of input, processing, output, storage, and distribution components.
- ii. The specifications and functionality of custom software are controlled or retained by the developing organization.
- iii. *Personal computers, network servers, and technical workstations* are terms used to highlight major uses of particular types of computers.
- iv. The output devices of a computer system can include *video display units, scanners, and printers*.
- v. The clock speed of a microprocessor today is commonly expressed in *teraflops*; earlier microcomputer speeds were reported in *gigahertz*.
- vi. Although Microsoft Office has a large share of the software suite market, Lotus, Corel, and Sun all offer competing productivity suites. Printing information on paper is the most common form of information output.
- vii. A pointing stick is the most popular pointing device used today.
- viii. A *trackball* is a type of pointing device that converts drawings and other graphic images into digital data in a computer system.
- ix. Software is considered the variable part of the computer, whereas the hardware is considered the invariable part.
- x. Presentation graphics packages have gotten more powerful in recent years, but not even the top-end packages enable end users to publish to the World Wide Web.

Questions xi to xx: Multiple choice questions

- xi. Software can be divided into two basic groupings, namely:
 - A. Programming languages and mark-up languages.
 - B. Application software and system software.
 - C. Specialty software and regular software.
 - D. None of the choices is correct.
- xii. Which of the following statements is *not* a characteristic of software suites?
 - A. They contain software tools that can help increase productivity, collaborate with colleagues, and access intranets, extranets, and the Internet
 - B. All components of the software use a similar graphical user interface
 - C. There is a custom graphical user interface for each application in the suite
 - D. They cost less than the total cost of buying the individual packages separately
- xiii. One disadvantage of software suites is that:
 - A. Users may be paying for features that they never use
 - B. The packages take up a lot of disk space
 - C. Upgrade costs are often expensive
 - D. All of the choices are correct.

- xiv. All of the following are Web browsers for navigating the World Wide Web, *except*:
- A. Firefox
 - B. Netscape Navigator
 - C. Mozilla
 - D. Windows Explorer
- xv. All of the following are considered characteristics of a word processing package *except*:
- A. Spell checker and thesaurus
 - B. Grammar and punctuation correction
 - C. Instant messaging
 - D. Web page design capability
- xvi. Spreadsheets packages are used by virtually every business for _____.
- A. analysis, planning, and modelling
 - B. maintaining accounting records, such as a general ledger
 - C. keeping up-to-the-minute inventory records
 - D. tracking human resources
- xvii. The mechanical loom was invented by _____.
- A. Blaise Pascal
 - B. Joseph Jacquard
 - C. Herman Hollerith
 - D. Keith Glennan
- xviii. The first generation of computers relied on _____.
- A. miniaturized circuits
 - B. transistors
 - C. vacuum tubes
 - D. punch cards
- xix. Which of the following would perform the required mathematical and logic operations of a central processing unit (CPU)?
- A. Control unit
 - B. Arithmetic-logic unit
 - C. RAID unit
 - D. Fuzzy logic unit
- xx. A touchpad is best described as a:
- A. Small, rectangular, touch-sensitive surface usually placed below the keyboard
 - B. Stationary device containing a roller ball whose top is exposed outside its case
 - C. Pen-shaped device with a ballpoint at the end
 - D. Device rolled along the desktop in order to move the cursor on the screen

Question xxi to xxx: Fill in the blanks

- xxi. _____ are the most important category of computer systems for both business people and individual consumers.
- xxii. The central processing unit (CPU) of a computer system is divided into two major subunits: the arithmetic-logic unit and the _____ unit.
- xxiii. Computers today operate in the nanosecond range, which is one _____ of a second.
- xxiv. A _____ is a stationary pointing device. You turn a roller with only its top exposed outside its case to move the cursor on the screen.
- xxv. A _____ user interface presents a user with icons, bars, buttons, boxes, and other images to initiate computer-based tasks.
- xxvi. A _____ allows users to use a computer by touching the surface of its video display screen.
- xxvii. An _____ system is an integrated set of programs that supervise the processing operations of the CPU, control the input/output functions of the computer system, and provide various support services.
- xxviii. _____ language is considered the most basic level of programming languages and involves the difficult task of writing instructions in the form of strings of binary digits.
- xxix. The primary purpose of an operating system is to maximize the _____ of a computer system by operating it in the most efficient manner.
- _____ packages have computerized the creation, editing, and printing of documents by electronically processing text data.

Question 2 (20 marks)

- a) Define the following terms: (6 marks)
- (i) Computer hardware
 - (ii) Software
 - (iii) Folder
- b) state four characteristics of digital computers (4 marks)
- c) With the help of a diagram, state and explain the functional components of the computer hardware system. (10 marks)

Question 3(20 marks)

- a) Give reasons as to why there is an increased preference to liquid crystal displays over the traditional visual display units on computers. (4 marks)
- b) State three uses and three limitations of optical disks in a school setup (6 marks)
- c) As the only computer literate teacher in your school, briefly describe the main functions of an operating system to the school's principal. (10 marks)

Question 4 (20 marks)

- a) Explain why ROM is necessary in a computer system. (2 marks)
- b) Explain why you would advise your school buy an application package, for school management functions, rather than develop their own. (5 marks)
- c) As the computer studies teacher of your school, the Board of Governors has bestowed in you the task of advising them on purchase of a printer to serve all printing needs of the school. State and explain factors that you would consider in purchasing one. (10 marks)

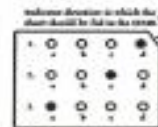
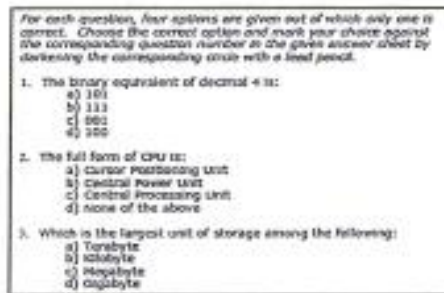
Question 5 (20 marks)

- (a) distinguish between a super and mainframe computer (2 marks)
- (b) Study the special characters and associated document below:



- (i). Name the input device for such characters (1 mark)
- (ii). State where they are commonly used (3 marks)
- (iii). State two advantages of these documents (2 marks)

- (c) Study the documents below:



(b) Pre-printed answer sheet

(a) Question sheet

- (i). Name the input device associated with these documents (1 mark)
- (ii). Explain how the input device works (2 marks)
- (iii). State three areas where they are used (3 marks)

- (d) Study the output device below



- (i). State the name of the printer (1 mark)
- (ii). Explain how it works (2 marks)
- (iii). State three advantages of the printer over other printers (3 marks)