

**University Examinations 2012/2013**

FIRST YEAR, FIRST SEMESTER, EXAMINATION FOR THE DEGREE OF BACHELOR OF  
SCIENCE IN ACTUARIAL SCIENCE AND STATISTICS INFORMATION TECHNOLOGY

**ICS 2107: INTRODUCTION TO COMPUTER TECHNOLOGY/INTRODUCTION TO  
INFORMATION TECHNOLOGY**

**DATE: DECEMBER 2012**

**TIME: 2 HOURS**

**INSTRUCTIONS:** Answer question *one* and any other *two* questions

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**QUESTION ONE – 30 MARKS**

- a. What is a computer? (2 Marks)
- b. Describe the various computer generations taking into account the key hardware and software technologies used. (8 Marks)
- c. Differentiate between the following terms using relevant examples:
  - i. Input and output devices (2 Marks)
  - ii. Data and information (2 Marks)
  - iii. System software and application software. (2 Marks)
  - iv. Off the shelf software and tailor made software. (2 Marks)
  - v. Software and hardware (2 Marks)
- d. Describe why a word processing application is important to an organization. Give five reasons. (5 Marks)
- e. What are the five basic operations performed by any computer system? (5 Marks)

**QUESTION TWO – 20 MARKS**

- a. Briefly explain what happens during the following computing data processing phases: (4 Marks)
  - i. Input phase
  - ii. Processing phase
  - iii. Output phase
  - iv. Storage phase
- b. The increasing popularity of computers has proved that it is a very powerful and useful tool. The power and usefulness of this popular tool are mainly due to its characteristics. Identify these characteristics. (8 Marks)
- c. Computers can be categorized into various categories according to their size and speed of processing data. Briefly discuss these categories. (8 Marks)

### QUESTION THREE – 20 MARKS

- a. Discuss four limitations of the primary storage of a computer system that lead to consumers purchasing the secondary storage? (8 Marks)
- b. Discuss how the following programs are useful to you in your program: (4 Marks)
  - i. Ms Word
  - ii. Ms Excel
  - iii. Ms Power Point
  - iv. Ms Access
- c. With the aid of a diagram explain the memory hierarchy. (8 Marks)

### QUESTION FOUR – 20 MARKS

- a. An organization is interested in buying a printer. Discuss any four factors should they consider when buying the printer? (6 Marks)
- b. Explain three examples of input devices and three examples of output devices. (6 Marks)
- c. Discuss any four ways in which you can make use of the internet as student. (8 Marks)

### QUESTION FIVE – 20 MARKS

- a. Briefly discuss the functions of the components of the “Central Processing Unit”. (6 Marks)
- b. Perform the following base conversions: (6 Marks)
  - i. 121 decimal to binary
  - ii. 691 decimal to octal
  - iii. 7A hex to decimal
- c. Add the binary numbers in binary form: (4 Marks)
  - i. 100110 and 1001
  - ii. 11101 and 1011
- d. Subtract the following numbers. (4 Marks)
  - i. 231 octal and 122 octal
  - ii. 11001 binary and 1100 binary