



MACHAKOS UNIVERSITY

University Examinations for 2017/2018

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

FIRST YEAR FIRST SEMESTER EXAMINATION FOR
BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY

SIT 100: FOUNDATION OF INFORMATION TECHNOLOGY

DATE: 11/12/2017

TIME: 8:30 – 10:30 AM

INSTRUCTIONS

Answer **question ONE** and any other **TWO** questions in this paper.

QUESTION ONE (30 MARKS)

- a) Define the following terms (4 marks)
- i Computer
 - ii Peripheral device
 - iii System unit
 - iv Troubleshooting
- b) Discuss the classification of computers by:
- i Speed (5 marks)
 - ii Generations (5 marks)
- c) List **four** types of keys found on a computer keyboard. Give an example of each. (4 marks)
- d) Describe three interface cables (3 marks)
- e) Describe **six** functions of an operating system (3 marks)

- f) Convert the following binary numbers to their decimal equivalent and then to their hexadecimal equivalent: (6 marks)
- i 110110101101₂
 - ii 11110₂
 - iii 101011001110₂

QUESTION TWO (20 MARKS)

- a) With the aid of a well labeled diagram explain the functional parts of a digital computer (4 marks)
- b) Troubleshoot the following computer problems, for each problem state at least two possible causes and the solution (6 marks)
- i The computer is not turning on
 - ii The monitor is not working
 - iii The mouse is not working properly
- c) Explain what the following acronyms represent their application areas.
- i OMR (2 marks)
 - ii OBR (2 marks)
- d) Describe the three types of computer memory giving an example of each type of memory (6 marks)

QUESTION THREE (20 MARKS)

- a) Distinguish between the following:
- i Warm booting and cold booting (2 marks)
 - ii Web client and web server (2 marks)
 - iii System software and application software (2 marks)
- b) Identify the parts of the following e-mail address labelled A, B, C, and D (4 marks)

Iat@africaonline.co.ke

↑ ↑ ↑ ↑
A B C D

- c) Describe **five** components of the motherboard. (10 marks)

QUESTION FOUR (20 MARKS)

- a) i) Define the term topology as used in computer networks. (2 marks)
- ii) With aid of well labelled diagrams describe three types of network topologies. (6 marks)
- b) Discuss three types of network cabling media. (6 marks)
- c) Describe six flow chart symbols (6 marks)

QUESTION FIVE (20 MARKS)

- a) Describe six facilities required for internet connection (6 marks)
- b) Describe three types of classification of operating systems. (6 marks)
- c) Explain **four** security threats organizations and individuals face when using computers. (4 marks)
- d) Describe security measures that can be used to combat the above problems. (4 marks)