



THE MOMBASA POLYTECHNIC UNIVERSITY COLLEGE

(A Constituent College of JKUAT)

(A Centre of Excellence)

Faculty of Engineering & Technology

DEPARTMENT OF COMPUTER SCIENCE & INFORMATION TECHNOLOGY

DIPLOMA IN INFORMATION COMMUNICATION TECHNOLOGY

(DICT M12 EV/DICT M12 FT)

EIT 2102: COMPUTER SYSTEMS & ORGANIZATION

SPECIAL/SUPPLEMENTARY EXAMINATION

SERIES: OCTOBER 2012

TIME: 2 HOURS

Instructions to Candidates:

You should have the following for this examination

- *Answer Booklet*

This paper consist of **FIVE** questions
Answer question **ONE** and any other **TWO** questions
Maximum marks for each part of a question are as shown
This paper consists of **THREE** printed pages
SECTION A (COMPULSORY)

Question One (30 marks)

- a) Define the term computer system. **(2 marks)**
- b) Describe the major operations performed by a computer. (Illustrate using a block diagram). **(5 marks)**
- c) State the meaning of the following terms as used in computer systems:
i) Memory
ii) Firmware
iii) Soft copy
iv) Peripheral **(4 marks)**
- d) Briefly explain **FIVE** major hardware components found within the system unit of a computer. **(10 marks)**
- e) Explain the following input devices.
i) Digitizer
ii) Bar-code reader
iii) Bio metric scanner
- f) State **THREE** disadvantages of computers. **(3 marks)**

SECTION B (Answer Any Two Questions)

Question Two (15 marks)

- a) Identify **THREE** advantages of liquid crystal display (LCD) and plasma screen technology over cathode ray tube technology. **(6 marks)**
- b) State the classification of computers. **(6 marks)**
- c) Differentiate between computers hardware and software. Give ONE example for each. **(3 marks)**

Question Three (15 marks)

- a) Differentiate between the following as used in computing.
i) RAM and ROM
ii) Warm booting and cold booting
iii) Hibernation and standby mode **(6 marks)**
- b) Explain the functions performed by the following CPU components.
i) ALU
ii) Control Unit
iii) Cache **(6 marks)**
- c) Explain the term motherboard and state why it is referred as so **(3 marks)**

Question Four (15 marks)

- a) Describe the defining features of the third generation computers. **(3 marks)**
- b) Explain the **FOUR** main types of ROM. **(8 marks)**
- c) Differentiate between CMOS and BIOS **(4 marks)**

Question Five (15 marks)

- a) Explain the boot up process of a PC with windows XP. **(6 marks)**
- b) State any **THREE** computer ports and the devices that connect through each of them. **(6 marks)**
- c) Explain the following CPU characteristics. **(3 marks)**
 - i) Multicore
 - ii) Multi-processor
 - iii) Clock rate