



MACHAKOS UNIVERSITY

University Examinations for 2018/2019

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

FIRST YEAR SECOND SEMESTER EXAMINATION FOR

ARTISAN IN ELECTRICAL AND ELECTRONIC TECHNOLOGY (POWER OPTION)

ARTISAN IN MECHANICAL ENGINEERING (PRODUCTION OPTION)

ARTISAN IN EARLY CHILDHOOD DEVELOPMENT EDUCATION

ARTISAN IN ELECTRICAL AND ELECTRONIC TECHNOLOGY

(TELECOMMUNICATION OPTION)

ARTISAN IN AUTOMOTIVE ENGINEERING

ARTISAN IN BUILDING TECHNOLOGY

ARTISAN IN FOOD AND BEVERAGE

ARTISAN IN GARMENT MAKING

ARTISAN IN CIVIL ENGINEERING

INTRODUCTION TO INFORMATION COMMUNICATION TECHNOLOGY

DATE: 23/4/2019

TIME: 2.30-5.30 PM

INSTRUCTIONS

Answer all questions in section A and any other FOUR questions from section B.

SECTION A: (30 MARKS)

1. Company XYZ intends to have a LAN connection in the organization. Identify four components that will enable it to communicate with the outside world. (4 marks)
2. Define each of the following terms as used in operating systems:
 - (i) Single-user multitasking systems
 - (ii) Multi-user multitasking systems (4 marks)

3. Eric intends to integrate ICT in their organization. Explain two challenges the management is likely to experience as a result of this. (2 marks)
4. Define the term *multi-media* as used in computers. (2 marks)
5. Rhoda lives in a region where telephone cables do not exist. She intends to have an Internet connection to her personal computer. Explain the most appropriate connection she could use. (4 marks)
6. As a researcher Julius concludes, “Computers have definitely changed the way society behaves.” Identity two possible reasons for his conclusion. (2 marks)
7. Explain the term *disk partitioning* as used in operating system installation. (2 marks)
8. Harry, a database administrator at Mrengo Company explained to the staff the importance of having data backup as their systems are exposed to risks. Describe two threats that he could have mentioned. (4 marks)
9. Define the term *flash memory* as used in computer storage media. (2 marks)
10. Define each of the following terms as applied in ergonomics.
 - (i) Physical ergonomics
 - (ii) Environmental ergonomics (4 marks)

SECTION B (40 MARKS)

Answer **Any Four** questions in this section

11.
 - a) Explain each of the following terms as used in e-mail.
 - i. Attach file
 - ii. Spam (4 marks)
 - b) Using a diagram, explain the term *wide area network* as used in computer networking. (3 marks)
 - c) The following is a list of computer components. Classify them as either *input devices or output devices*; joystick, microphone, speakers, headphones, scanner, projector. (3 marks)
12.
 - a) Distinguish between *information systems* and *communication systems* as used in ICT. (4 marks)
 - b) Danny, a systems administrator in his organization, intends to procure utility software for the organization. Explain three factors that he should consider.

- (6 marks)
13. a) Describe the fetch-execute cycle using an illustration. (3 marks)
- b) With the aid of an example in each case, define each of the following types of files:
- i. System file
- ii. User file (4 marks)
- c) Ben has been employed as a computer technician and is required to take care of the computers. Outline three ways in which he could maintain/protect computer hardware. (3 marks)
14. a) Explain the term *zip memory* as used in data storage. (2 marks)
- b) A newly elected government has introduced the e-cabinet system in the country. Outline two benefits the government is likely to achieve. (2 marks)
- c) Distinguish between computer hardware and computer software. (6 marks)
15. a) Define each of the following terms as used in computer security:
- i. Power surge
- ii. Spike (2 marks)
- b) The system administrator of a certain college has recommended Internet connection to the college administration to improve service delivery to the students. Give two reasons to justify his recommendation. (4 marks)
- c) Daniel, the managing director of a certain manufacturing company has decided to allow their suppliers access to the organization's intranet. Explain two advantages that both the organization and the suppliers will enjoy if this decision is implemented. (4 marks)