



MACHAKOS UNIVERSITY

University Examinations for 2022/2023

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

THIRD YEAR SPECIAL/SUPPLEMENTARY EXAMINATION FOR

BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY)

SIT 365: SOFTWARE METRICS

DATE:25/7/2023

TIME:2:00-4:00 P.M

INSTRUCTIONS: Answer Question **ONE** and other **TWO** Questions from this paper.

QUESTION ONE (COMPULSORY, 30 Marks)

- a) Describe three types of data backup (6 marks)
- b) Discuss TWO preventive measures taken to avoid common computer hardware problems experienced in the computer labs (4 marks)
- c) Discuss three primary hardware components that a server admin should monitor to keep hardware in good health during in – house server management (6 marks)
- d) Discuss briefly the meaning of domain integrity (6 marks)
- e) Analyze FOUR techniques used when your system freezes during windows update (8 marks)

QUESTION TWO (20 MARKS)

- a) Discuss TWO types of servers (4 marks)
- b) Explain the Human Factor in Computer Network Support (4 marks)
- c) Security management can come in various different forms. Describe three common types of security management strategies (6 marks)
- d) Describe THREE resource management techniques (6 marks)

QUESTION THREE (20 Marks)

- a) Describe the functions of a maintenance engineer (6 marks)
- b) Analyze the factors you would consider when selecting the right server (6 marks)
- c) Define automation (2 marks)

- d) Discuss three parameter checks done to minimize risks and ensure viability of automated systems (6 marks)

QUESTION FOUR (20 MARKS)

- a) Outline the steps followed by a network administrator to ensure that the computer systems are secure. (4 marks)
- b) Explain the following physical or virtual network devices
- i. Wireless LAN Controllers (3 marks)
 - ii. Routers (3 marks)
- c) Discuss the advantages of client server networks (6 marks)
- d) Describe computer network support (4 marks)

QUESTION FIVE (20Marks)

- a) Discuss four benefits of end user training (4 marks)
- b) Explain the function of the following servers:
- i. DNS server (2 marks)
 - ii. DHCP server (2 marks)
- c) Discuss the importance of group management (4 marks)
- d) Analyze the reasons why resource management is important in an organization (4 marks)
- e) Describe the functions of content management system (4 marks)