



MACHAKOS UNIVERSITY

University Examinations for 2022/2023

SCHOOL OF ENGINEERING AND TECHNOLOGY

DEPARTMENT OF COMPUTING AND INFORMATION TECHNOLOGY

FIRST YEAR SPECIAL / SUPPLEMENTARY EXAMINATIONS FOR

BACHELOR OF SCIENCE (INFORMATION TECHNOLOGY)

SIT 109 INTERNET TECHNOLOGY

DATE: 27/7/2023

TIME:11.00-1.00 PM

INSTRUCTIONS:

Answer question ONE and any other TWO questions

QUESTION ONE (30 MARKS)

- a) Define the following terms
 - i. Search engine
 - ii. Worldwide web (www)
 - iii. Web browser (6 marks)
- b) IP routing can either be dynamic or static. Explain the difference. (4 marks)
- c) State two dangers resulting from internet use (2 marks)
- d) Explain the term “spam” in relation to internet use. (2 marks)
- e) State and explain four components that a person needs in order to connect to the internet. (4 marks)
- f) Explain the term ‘protocol’. (2 marks)
- g) Explain the concept of client server architecture. (5 marks)
- h) State five applications of server-side scripting? (5 marks)

QUESTION TWO (20 MARKS)

- a) Explain any four HTTP request methods. (8 marks)
- b) Give four differences between Apache and IIS Web servers. (8 marks)
- c) Briefly discuss two physical network topologies. (4 marks)

QUESTION THREE (20 MARKS)

- a) Outline four advantages of using an ISP to host a website. (4 marks)
- b) State and explain two types of audio files outlining their similarities and differences. (8 marks)
- c) Explain two major considerations that should be made when choosing a web host. (4 marks)
- d) Differentiate between *incremental* and *full back up*. (4 marks)

QUESTION FOUR (20 MARKS)

- a) State and explain any five protocols used on the internet and illustrate the roles played by each protocol? (5 marks)
- b) Using a URL of your choice, show the different parts of an Internet address. (3 marks)
- c) Discuss three benefits of using servlets (3 marks)
- d) After successfully designing his website, Paul is considering hosting the site. State and explain any four options available when setting up a web server (4 marks)
- e) How are MIME types used when requesting or receiving documents on the Web? (2 marks)
- f) Define the term bandwidth and explain why it's necessary to have a large bandwidth (3 marks)

QUESTION FIVE (20 MARKS)

- a) Distinguish between ASCII Text Files and Binary Files? (4 marks)
- b) What is the most popular method for a web administrator to upload files to their website and how is it used? (4 marks)
- c) Briefly explain the THREE (3) parts of each HTTP Request Line? (3 marks)
- d) State and explain THREE roles and responsibilities of a server administrator? (6 marks)
- e) Name three most popular web browsers. (3 marks)