



PAN AFRICA CHRISTIAN UNIVERSITY

BACHELOR OF BUSINESS INFORMATION TECHNOLOGY

END OF SEMESTER EXAMINATION

DEPARTMENT: COMPUTING & INFORMATION TECHNOLOGY

COURSE CODE: BIT **308**

CAMPUS: ROYSAMBU

COURSE TITLE: COMPUTER NETWORKS

EXAM DATE: DAY OF WEEK, DATE (DDTH MONTH YEAR)

TIME: START HOUR – END 13:00-17:00HRS

INSTRUCTIONS

- This exam paper has **five** questions
- Read all questions carefully before attempting.
- Answer All questions in Section A and any other Four questions in Section B.
- Write only your **student number** on the answer booklet provided.
- None programmable calculators permitted
- Calculators on phones, tablets and computers are NOT permitted in Theory Papers

SECTION A
(Answer ALL questions in this section)

QUESTION 1:

XYZ is an established company based in Nairobi, with branches in Mombasa, Kisumu, Eldoret and Meru. As junior network administrator, you are required to provide technical consultancy and setup a network for the company to allow real time synchronization of operations in all the branches.

- i. Briefly describe this type of network, justifying your arguments accordingly. **(5 Marks)**
- ii. Describe how you will achieve this, indicating the rationale for any network component used. **(5 Marks)**

SECTION B
(Answer ANY 3 questions in this section)

QUESTION 2:

Network media exists in different forms and types and their knowledge is significant to a network administrator. Discuss **(10 Marks)**

QUESTION 3:

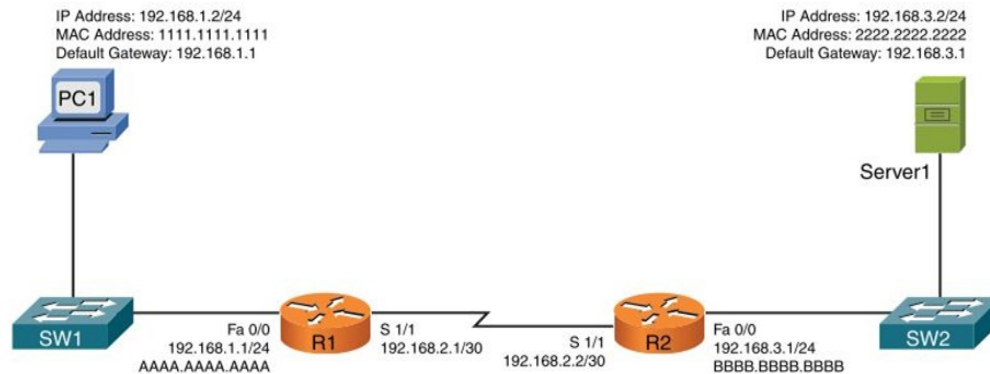
You have been asked to provide consultancy on suitable topology for a 100-computer cybercafé.

- i. Justify your choice of topology for this case. **(5 Marks)**
- ii. Describe the appropriate type of network architecture for the above chosen topology. **(5**

Marks)

QUESTION 4:

Study the figure below and use to answer the questions that follow



- i. Applying the knowledge on the TCP/IP model, explain the process of routing a packet from PC1 to server1. **(5 Marks)**
- ii. Explain how virtual circuit model can be used to improve quality of service between PC1 and Server1. **(5 Marks)**

QUESTION 5:

- a) Explain the importance of OSI reference model to a network administrator. **(5 Marks)**
- b) Discuss the role played by network standards organizations in networking domain.

(5

Marks)

QUESTION 6:

- a) Explain the significance of network software in promoting data communication.

(4

Marks)

- b) Describe THREE packet switching paradigms.

(6 Marks)