REFORMED CHURCH UNIVERSITY

FACULTY OF EDUCATION AND SOCIAL SCIENCES

BACHELOR OF EDUCATION HONOURS DEGREE IN INFORMATION TECHNOLOGY

FUNDAMENTALS OF COMPUTER NETWORKS

HICT 115

Part 1 Semester 1 Examination

Total Marks [100]

Date: October 2024

Time: 3 Hours

INSTRUCTIONS

1. This paper has *six (6)* questions

2. Answer any *four (4)* questions

3. Each question carries *25 marks*

4. Start each question on a new page

1. Discuss the need of network in today's world. **(9 marks)**

2. With aid of diagram discuss the following network models
   a. OSI model. **(8 marks)**
   b. TCP/IP model. **(8 marks)**

3. Briefly explain how the following network equipment are used in network
   a. Hub
   b. Switch
   c. Router
   d. NIC
   e. Ethernet cable. **(25 marks)**

4. With the aid of diagram explain how VPN works. **(25 marks)**

5. Discuss any five network security threats and how to prevent them. **(25 marks)**

6. Draw a network layout of star topology and bus topology connecting five computers outline advantages and disadvantages. **(25 marks**

END OF PAPER