



Scott Christian UNIVERSITY

SCHOOL OF PROFESSIONAL STUDIES

BACHELOR OF BUSINESS INFORMATION TECHNOLOGY

UNIT CODE/NAME: BBIT 312: DATA COMMUNICATIONS

September – December 2019/2020 End Semester Exam - Time: 2 Hours

Instructions: Answer Question ONE (Compulsory) and any other TWO questions.

QUESTION ONE

- a) Explain the following types of transmission modes including diagrams (9 Marks)
 - i. Simplex
 - ii. Half duplex
 - iii. Full duplex
- b) Define protocol and explain any three main differences between the TCP and UDP protocols. (8 Marks)
- c) By using neat diagrams, compare TCP/IP reference model and OSI reference model (8 Marks)
- d) State any five requirement of data communications (5 Marks)

QUESTION TWO

- a) Define multiplexing and briefly explain four types of multiplexing techniques. (5 Marks)
- b) Explain the function of the following (6 Marks)
 - i. Network Virtual terminal
 - ii. File Transfer, Access and Management
 - iii. Directory Services
- c) Distinguish between serial and parallel transmission (4 Marks)

QUESTION THREE

- a) Describe the function of a switch. At what layer of the OSI model does it operate? (3 Marks)
- b) Define a switched network and explain three methods of switching (8 Marks)
- c) Explain ATM (4 Marks)

QUESTION FOUR

- a) State any three advantages and disadvantages of fibre optic cable (3 Marks)
- b) Explain twisted pair (4 Marks)
- c) Discuss any two: (8 Marks)
 - i. Types of errors
 - ii. Methods of error correction

QUESTION FIVE

- a) Briefly explain the seven layers of the OSI model. (7 Marks)
- b) Explain the FOUR main categories of wireless transmission (8 Marks)