



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91, CADASTRAL ZONE, NNAMDI AZIKIWE EXPRESSWASY, JABI-ABUJA
FACULTY OF SCIENCES
DEPARTMENT OF COMPUTER SCIENCE

2021_1 EXAMINATIONS

COURSE CODE: CIT311

COURSE TITLE: Computer Networks

CREDIT UNITS: 3

TIME ALLOWED: 2½ HOURS

INSTRUCTION: Answer Questions 1 (One) and Any Other Four (4)

- 1a.) Enumerate the advantages and disadvantages of a Transparent Bridge? **(3 Marks)**
- b) In a tabular form, differentiate between OSI and TCP reference model. **(5 marks)**
- c.) State the advantages of Routers over Bridges **(5 marks)**
- d.) Explain the principles that were adopted to arrive at the number of layers of the OSI model **(3marks)**
- e.) Compare the following:
- i) Logical Link Control and Medium Access Control **(2Marks)**
 - ii) Half Duplex and Full Duplex transmission **(2Mark)**
 - iii) Frequency Division Multiplexing and Time Division Multiplexing **(2Mk)**
- 2.a) Describe any four(4) functions of a Network Switch **(4 marks)**
- b) Describe the two sub-layers of the Data Link Layer **(4marks)**
- c) Describe the following types of computer network **(4 Marks)**
- i) Switch Networks
 - ii) Broadcast network
- 3a) Explain any four classes of service defined for ATM, according to ATM Forum UNI 4.0 Specification and their associated quality of service parameters **(8 marks)**
- b) Define the Domain Name System and Outline the benefits Domain Name System **(4marks)**
- 4a) Write an appropriate pseudo code for source routing Bridges **(7marks)**
- b.) Give details description of the Star topology **(5 marks)**
- 5a) Give any six (6) functional description of Gateways **(5 marks)**
- (b) Briefly comment on the following services of the Application layer:

- (i) Telnet, **2 marks**
- (ii) File Transfer protocol (FTP) **2 marks**
- (iii) Remote Procedure Call (RPC) **3 marks**

6a) Describe the features IEEE 802.3 and Ethernet standard for LAN network(**5mks**)

b)What are the Goals of a Computer Network?(**4mks**)

c)List any six (6) resources that can be shared over a computer network (**3mks**)