



NATIONAL OPEN UNIVERSITY OF NIGERIA
PLOT 91 CADASTRAL ZONE, NNAMDI AZIKWE EXPRESSWAY, JABI, ABUJA
FACULTY OF SCIENCES
DEPARTMENT OF COMPUTER SCIENCE
2020_2 EXAMINATIONS

COURSE CODE: CIT305

COURSE CREDIT: 3

COURSE TITLE: NETWORKING AND COMMUNICATION TECHNOLOGY

TIME ALLOWED: 2 ¹/₂ HOURS

INSTRUCTION: ANSWER QUESTION ONE (1) AND ANY OTHER (4) QUESTIONS

- 1a) (i) Write on two commonly used wired technologies for transmitting data from one point to another
(2 marks)
- 1a (ii) Outline any two categories of basic data-link configurations as used in the second layer of Open System Interconnection (OSI) reference model
(3 marks)
- 1a (iii) What is the objective of validation process and test metrics in wireless LAN (2 marks)
- 1a (iv) Itemize the primary objectives of internet protocol as used in layer three of internet suites
(2 marks)
- 1b Briefly describe the terms “enterprise private network” in configuring access rules in computer networking
(3 marks)
- 1c (i) List any two common types of threats affecting enterprise network when connected to the internet.
(2 marks)
- 1c (ii) State any three Standard design requirements used for effective network planning and design
(3 marks)
- 1c (iii) Briefly describe the Significance of Digital Modulation in data communication (3 marks)
- 1c (iv) State the two general types of access offers by ISDN (2 marks)
- 2a Write short notes on the following Wireless LAN technologies as used in connecting devices for data transmission (i) Communications satellites (ii) Cellular and PCS systems (iii) Infrared communication
(6 marks)
- 2b The data link layer in the OSI model combine packets and bytes into frames and provides access to media using MAC address. Briefly describe three categories of basic data-link configurations. (6 marks)
- 3a What is the objective of the validation process and test metrics in WLAN Performance Metrics?
(6 marks)
- 3b State at least three uses of TCP in wireless LAN (6 marks)
- 4a (i) What is the major function of predefined enterprise networks? (3 marks)
(ii) State three predefined enterprise networks that are created upon installation (3 marks)
- 4b. List any six typical project business requirements used in Effective Network Planning and Design
(6 marks)
- 5a. Write short notes on the following common analog modulation techniques:
(i) Amplitude Modulation (AM) (2 marks)
(ii) Double-Sideband Modulation (DSB) (2 marks)
(iii) Single-sideband modulation (SSB, or SSB-AM), (2 marks)
- 5b. Explain briefly the following Digital Modulation Techniques:
(i) Amplitude-Shift Keying (ASK) (ii) Frequency-Shift Keying (FSK) (iii) Phase-Shift Keying (PSK)
(6 marks)
- 6a. (i) What is Integrated Services Digital Network (ISDN)? (4 marks)
(ii) State one advantage of ISDN over other digital communications technologies (2 marks)
- 6b. (i) Itemize the three basic types of channels defined by ISDN Standards (4 marks)
6b (ii) Define a B channel as used in Integrated Services Digital Network. (2 marks)