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(FOR THE CANDIDATES ADMITTED

20UIT412

DURING THE ACADEMIC YEAR 2020 ONLY)

REG.NO. :

N.G.M.COLLEGE (AUTONOMOUS) : POLLACHI

END-OF-SEMESTER EXAMINATIONS : JULY 2022

B.Sc.IT

MAXIMUM MARKS: 70

IV SEMESTER

TIME : 3 HOURS

PART – III

### DATA COMMUNICATION AND NETWORKS

SECTION - A

(10 X 1 = 10 MARKS)

#### ANSWER THE FOLLOWING QUESTIONS.

#### MULTIPLE CHOICE QUESTIONS.

1. An \_\_\_\_\_ signal is similar to a sinusoidal waveform.  
a. digital      b. data      c. analog      d. periodic
2. In a \_\_\_\_\_ error multiple bits of a binary value are changed.  
a. single bit      b. single byte      c. two bit      d. burst
3. The TCP/IP has \_\_\_\_\_ layers.  
a. 4      b. 6      c. 7      d. 8
4. The \_\_\_\_\_ layer is also called as network layer.  
a. logical      b. packet      c. link      d. physical
5. \_\_\_\_\_ is used to increase the power of a signal and retransmits it.  
a. repeaters      b. bridge      c. gateway      d. routers

#### ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES (K2)

6. Define Multiplexing.
7. What is tree network topology?
8. Define LAN, WAN and MAN.
9. Recite the benefits of asynchronous transfer mode.
10. Define uses of leased line.

SECTION– B

(5 X 4 = 20 MARKS)

#### ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS. (K3)

11. a. Explain briefly about the information encoding.

(OR)

- b. Explain simplex communication with a neat diagram.

(CONTD....2)

12. a. Describe LRC method for the error detection.  
**(OR)**  
b. Explain the basic functions of routers.

13. a. Summarize the functions of Ethernet.  
**(OR)**  
b. Describe the uses of ISDN interfaces.

14. a. Demonstrate the function of congestion control.  
**(OR)**  
b. Illustrate the layers in ATM.

15. a. Discuss the different access method of Internet.  
**(OR)**  
b. Explain the concept of cable modems.

**SECTION– C**

**(4 X 10 = 40 MARKS)**

**ANSWER ANY FOUR OUT OF SIX QUESTIONS**  
**(16th QUESTION IS COMPULSORY AND ANSWER ANY THREE QUESTIONS (FROM Qn. No: 17 to 21) (K4 (Or) K5)**

16. Describe the types of network topologies with a neat diagram.

17. Describe analog and digital transmission methods.

18. Summarize the transmission medium and their types.

19. Explain LAN and MAN network with an example.

20. Elaborate working principle and characteristics of X.25 protocol.

21. Discuss the history, growth and architecture of Internet.

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