(FOR THE CANDIDATES ADMITTED DURING THE ACADEMIC YEAR 2023-24 ONLY)

SUBJECT CODE 23 UCT 4A1

REG.NO.

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

END-OF-SEMESTER EXAMINATIONS : MAY – 2025

B.Sc. – COMPUTER TECHNOLOGY **MAXIMUM MARKS: 75**

IV SEMESTER **TIME : 3 HOURS**

PART – III
DATA COMMUNICATION NETWORK

SECTION – A (10 X 1 = 10 MARKS)

ANSWER THE FOLLOWING QUESTIONS. **(K1)**

1. An analog signal is continuous in both _____ and _____

   a) Frequency, power b) Time, amplitude

   c) Modulation, waveform d) Segments, packets

2. Co-axial cable consists of _____ concentric copper conductors.

   a) 4 b) 3 c) 2 d) 1

3. The number of layers in ISO OSI reference model is _____

   a) 4 b) 5 c) 6 d) 7

4. Which address is used on the Internet for employing the TCP/IP protocol?

   a) Physical and Logical address b) Port address

   c) Specific address d) All the above

5. Which of the following is false with respect to UDP?

   a) Connection Oriented b) Unreliable

   c) Transport layer protocol d) Low overhead

ANSWER THE FOLLOWING IN ONE (OR) TWO SENTENCES. **(K2)**

6. Define multiplexing.
7. Which topology requires multipoint connection?
8. Which layer decides data transmission rate?
9. Which address is used to identify a process on a host by the transport layer?
10. How many characters in the entire host name?

SECTION – B (5 X 5 = 25 MARKS)

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

11. a) Elaborate on the concept of a Protocal.

(OR)

b) Write short notes on Frequency Shift Keying.

(CONTD …. 2)

12. a) What is meant by packet switching? Explain.

(OR)

b) Explain the characteristics of star, tree and ring topologies.

13. a) What is LAN? Provide a brief description.

(OR)

b) What is WAN? Provide a brief overview.

14. a) What is IPV6? Give a consise explanation**.**

(OR)

b) Explain the function of bridges.

15. a) Elucidate the concept and importance of UDP packet.

(OR)

b) Write short notes on MIME.

SECTION - C (5 X 8 = 40 MARKS)

ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.(K4/K5)

16. a) Discuss the various data transmission modes in detail.

(OR)

b) What are the methods of digital transmission? Explain.

17. a) Explain the guided transmission medias in detail.

(OR)

b) How will you detect and correct the transmission errors?

18. a) Elucidate the OSI Layer functions.

(OR)

b) Discuss the Frame relay in detail.

19. a) Explain the purpose repeaters.

(OR)

b) Elucidate the working principles of routers and gateways.

20. a) Explain the purpose of Domain Name System.

(OR)

b) Discuss the working principles of E-Mail.