(FOR THE CANDIDATES ADMITTED SUB CODE [22UIT411]

DURING THE ACADEMIC YEAR 20   ONLY)   REG.NO. : [   ]

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

END-OF-SEMESTER EXAMINATIONS : MAY 2024

B.Sc.(IT)   **MAXIMUM MARKS: 50**

SEMESTER : IV   **TIME : 3 HOURS**

PART - III

22UIT411 – DATA COMMUNICATION AND NETWORKS

SECTION – A   **(10 X 1 = 10 MARKS)**

ANSWER THE FOLLOWING QUESTIONS.(K1)

1. The strength of a signal at any point of time is called as its _____.

 (a) amplitude   (b) frequency   (c) period   (d) phase

2. The _____ defines how much data can be sent before it must wait to receive an acknowledgment from the receiver.

 (a) buffer   (b) memory   (c) parity   (d) sliding window

3. In Token ring, a special packet containing a _____ goes around the network.

 (a) data   (b) header   (c) token   (d) bit

4. X.25 is based on the _____ technique.

 (a) packet switching   (b) circuit switching   (c) distributed routing (d) concurrent approach

5. In SLIP/PPP, the connection is called _____.

 (a) dial-left   (b) dial-right   (c) dial-up   (d) dial-down

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

6. What is BCD? What are its limitations?

7. Explain two different approaches of packet switching.

8. List the different layers in the OSI model.

9. Expand: (i) BECN (ii) FECN

10. What are the fundamental services provided by an ISP?

SECTION – B   **(5 X 3 = 15 MARKS)**
ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.
                                                          (K3)

11.   a) Describe the characteristics of data communication.
                              (OR)
        b) Examine the NyQuist Theorem.
12.   a) Explain the network topologies.
                              (OR)
        b) Interpret factors affecting routing algorithms.
13.   a) List Ethernet properties.
                              (OR)
        b) Describe the protocols in computer communications.
14.   a) Examine the characteristics of X.25.
                              (OR)
        b) What is congestion control? How is it achieved in frame relay?
15.   a) How does a gateway work? Explain.
                              (OR)
        b) Discuss the DSL and its standards.

SECTION – C   **(5 X 5 = 25 MARKS)**
ANSWER EITHER (a) OR (b) IN EACH OF THE FOLLOWING QUESTIONS.
                                                          (K4 (Or) K5)

16.   a) Discuss about bandwidth of a signal and medium.
                              (OR)
        b) Analyze multiplexing and its types.
17.   a) Summarize error detection in data communication.
                              (OR)
        b) Discuss the guided transmission media in detail.
18.   a) Determine the OSI layer functions.
                              (OR)
        b) Discuss about ISDN architecture.
19.   a) Justify, how does frame relay work?
                              (OR)
        b) Describe the contents of an ATM cell.
20.   a) Classify the types of bridges based on its functions.

                              (OR)
        b) Discuss about cable modems.
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