National Institute of Technology, Silchar Mid-Semester (UG) Examinations, October' 2021

Subject Code CS-301 Subject: Computer Network

Semester: 5th Department: **CSE** Duration: One Hour, Total Marks: 20

Figure in the right hand margin indicates full marks for the question.

All questions are compulsory.

1. (a) Discuss two pros and two cons of OSI reference model in comparision to 2 TCP/IP model. Define the components of Delay with suitable examples. 3 **(b)** Justify the validity of the following statement 2 2. (a) "If x^2 bit dataword is encoded with two dimensional parity check code having x + 1 rows then it is possible to correct up to x bit errors." **(b)** Differentiate the three persistent CSMA schemes. 3 3. Following HDLC Frame bit sequence is received, which has 1 byte control 5 field and 2 bytes frame check sequence field. Answer the questions below for the Frame: $"01111110 \ 11111001 \ 01101101 \ 10011010 \ 11001111$ 10101011 10011111 01101111 110" i. How many bytes are used for address? ii. How many bits of actual data is received by the receiver in this iii. How many frames are received by the sender if receiver was earlier acknowledged the receipt of 5 frames? iv. How many times bit stuffing is done in this frame? v. What is the type of HDLC frame? 4. Stations A, B and C uses 8 bit Chip Spreading code 10101110, 10010010 5 and 10010101 respectively with XNOR. Compute the receiver sum value (final sum) if A, B and C transmits 1, 1 and 0 bit respectively?
