Name: _____ Roll No._____
Section: _____

Computer Networks Midterm-II Exam Total marks: 25
Time allowed: 90 minutes

NOTE: Write **only** in the space provided for the answers.
This exam consists of 5 questions on 3 pages.

Q1. Sixteen-bit messages are transmitted using a Hamming code. How many check bits are needed to ensure that the receiver can detect and correct single bit errors? Find the bit pattern transmitted for the message 1001011100110101. Assume right most bit as least significant bit and even parity. (1+5)

Q2. What should be window size for Selective repeat protocol, if a 3 bit sequence number is used? What is the potential error if the window size is increased beyond this size? (1+4)

Q3. You have to design data link layers of wireless medium using pipelining. Which protocol will you use to handle errors and why? State any disadvantage of the protocol you decide to use. (1+2+1)

Q4. Describe the algorithm of Ethernet protocol which is used when collision occurs during medium access. State its advantage. (4+2)

Q5. Why minimum size of the Ethernet frame is required? Please describe two reasons (4)