Row B   **Name:**   **Group:**

Tick (check) the correct answer (only one choice). Weight: 0.25pcts per question.

1. Using the bit stuffing technique and the sequence 01111110 for identifying a Flag field, how will appear the sequence 010011111110 within the Information field:
   a. 0100110111100
   b. 0100111101110
   c. 0100111011110
   d. No one above

2. Flow control is mainly a function of which ISO/OSI layer?
   a. Data link
   b. Application
   c. Session
   d. Physical

3. One human hearing system operates in the range of 200 – 20,000Hz. What minimum sampling rate will be sufficient to preserve the information content of the signals within this range:
   a. 40000samples/sec
   b. 4000samples/sec
   c. 39600samples/sec
   d. None of those above

4. For the Differential Manchester encoding technique the bits interpretation is based on:
   a. Level of signal
   b. Transition at the end of the bit period
   c. Transition at the beginning of the bit period
   d. Transition at the middle of the bit period

5. Which one of the following events is not possible in wireless LANs?
   a. Acknowledgement of data frames
   b. Multi-mode data transmissions
   c. Collision detection
   d. Connection to wired networks

6. HDLC is:
   a. A standardized application control protocol
   b. A standardized data link control protocol
   c. A standardized network control protocol
   d. A standardized transport control protocol

7. Which of the following routing techniques does not require any information about the network?
   a. Flooding routing
   b. Fixed routing
   c. Adaptive routing
   d. All options

8. IPv4 addressing which allows communications with a group of connected devices is:
   a. Multicast addressing
   b. Unicast addressing

c. Broadcast addressing

d. None of those above

9. Explain why 64kbps is the basic data rate for digital transmissions. (0.5p)
10. The DNS application service (aim, possible implementations, DNS name structure) (1p)
11. Which are the light propagation modes through a fiber; describe each one shortly. (0.5p)
12. Describe the flow control technique Sliding Window (0.5p)
13. For an Ipv6 address with FE80::/64 prefix. Is this a global or a local address? Justify briefly.
    Meaning of :: from the above address representation (0.5p).
14. The IP address on a host computer is 16.10.2.2 and the subnet mask is 255.255.224.0. For the layout below, fill in the information required in such a way that all PCs and the router may communicate between them and outside the given network. (1p)