

## Graded Assessment – Reliable Services and Data Link Controls

Q1. Perform the bit stuffing procedure for the following binary sequence: 1101111111011111110101. What is the outcome?

- 110111110110111110110101
- 110111111101111111010100
- 0010000000100000001010
- None of the above

Q2. Perform bit de-stuffing for the following sequence: 11101111101111100111110.

- 11101111111111011111
- 00010000010000011000001
- 11100111111111001111
- None of the above

Q3. PPP is a data link protocol for point-to-point lines in Internet. Its framing is based on which of the following?

- Byte stuffing
- **Bit stuffing**
- Word stuffing
- None of the above

Q4. HDLC is another data link control protocol widely in use. Its framing is based on which of the following?

- **Byte stuffing**
- Bit stuffing

- Word stuffing
- None of the above

Q5. Which of following statements are true for HDLC?

- supports various data transfer modes
- supports multi-point links and point to point links
- implements error control and flow control mechanisms
- **All of the above**

Q6. In PPP authentication, which of the following is true for Challenge-Handshake Authentication Protocol (CHAP)

- After several attempts, LCP closes link
- **Authenticator can reissue challenge during session**
- **Initiator and authenticator share a secret key**
- Initiator must send ID and password

Q7. In error detection and loss recovery, which of the following statement is correct

- Frames may undergo errors in transmission
- CRCs detect errors and such frames treated as lost
- Frames lost due to loss-of-synchronization or receiver buffer overflow
- **All of the above**

Q8. In multiplexing, Last IN First Out (LIFO) is used to determine the order of packet transmission

- True
- **False**

Q9. Generic Framing Procedure (GFP) allows the implementation of multiple transport modes that may coexist within the same transport channel

- **True**
- False

Q10. In Generic Framing Procedure (GFP), which of the following sentences are correct

- **GFP uses a variation of HEC-based self delineation technique**
- GFP uses an explicit payload length indicator provided in its frame header to accommodate variable length PDUs
- **GFP provides flexible encapsulation framework that supports either a fixed or variable length frame structure**
- GFP rely on byte-stuffing mechanism to delineate protocol data units (PDUs)