

Sinhgad Technical Education Society's  
RMD Sinhgad School of Engineering, Warje, Pune-58  
Department of Computer Engineering  
A.Y. 2024-25 (Sem - I)

SET-A

UNIT TEST: 1

Class: TE

Subject: Computer Network & Security

Date: 8/8/24

Time: 1Hr. (12:00 PM TO 1:00 PM)

Maximum Marks: 30

**Instructions to Candidates:**

1. Attempt Questions Q.1 OR Q.2, Q.3 OR Q.4.
2. Neat diagrams must be drawn wherever necessary.
3. Assume suitable data, if necessary.

- Q1 a) Draw and explain OSI Model. (5)  
b) Represent 1100100111 using line coding( Data stream can be different) (5)  
i)Differential Manchester  
ii)Manchester  
c) Explain in brief: FHSS and DSSS. (5)
- OR
- Q2 a) What are the different Network Devices? Explain in detail. (5)  
b) Compare LAN, MAN, WAN. (5)  
c) Explain different network architecture. (5)
- Q3 a) Discuss the services provided by the data link layer to the network layer. (5)  
b) Explain Various Framing Methods in the data link layer. (5)  
c) Define hamming distance. Explain hamming code with example (5)
- OR
- Q4 a) Short note on Binary Exponential Back -off algorithm (5)  
b) Draw and explain frame format of Ethernet (5)  
c) Justify answer using CRC for divisor: 1101 dividend: 100100. (5)