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Sub Code: NMCA511/NMCAE25A

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**MCA**  
**(SEM V) THEORY EXAMINATION 2017-18**  
**COMPUTER NETWORK**

**Time: 3 Hours****Total Marks: 100****Notes:** Attempt all Sections. Assume any missing data.**SECTION-A**a) **Attempt all questions.****[10X2=20]**

- a) What is computer network?
- b) What do you mean SNR?
- c) What is Signals? Explain different types of signals
- d) If a periodic signal is decomposed into five sine waves with frequencies of 100, 300, 500, 700, and 900 Hz, what is its bandwidth?
- e) What is *checksum*?
- f) Define Ethernet?
- g) Write about different transmission modes
- h) Write about CSMA/CD protocol
- i) Write about socket?
- j) What is Firewall? Explain

**SECTION-B**2 **Attempt any five questions.****[5X10=50]**

- b) What is Data Communication? Explain components of Data Communication?
- c) What is Network Model? Explain the layers of TCP/IP model.
- d) Explain UDP, TCP and SCTP Protocol in detail.
- e) What is data compression? Explain the Huffman Coding with Example.
- f) What is Protocol? .Explain different types of Standard Client-Server Protocols.
- g) Write short notes on i) Repeaters ii) HUB iii) switch iv) Bridge
- h) Briefly explain about IP Addressing.

**SECTION-C****Note: Attempt any two questions.****[2X15=30]**

3.
  - a) Define topology . Discuss different types of topologies
  - b) Describe Transmission Impairment.
4.
  - a) What is digital signature. Define public key & private key in detail.
  - b) Discuss about FDM, WDM and TD.
5.
  - a) What is Switching? Also discuss the different types of Switching Techniques.
  - b) What is security goals? Describe the different types of Attacks.