

**MAM**  
**(SEM-X) THEORY EXAMINATION 2018-19**  
**COMPUTER NETWORK & SECURITY**

**Time: 3 Hours****Total Marks: 100****Note: 1.** Attempt all Sections. If require any missing data; then choose suitably.**SECTION A**

- 1. Attempt all questions in brief. 2 x 10 = 20**
- a What is the difference between LAN and WAN?
  - b Write about Hamming distance.
  - c Write about throughput.
  - d What is gigabit Ethernet?
  - e What is the basic principle of Flow Control?
  - f. What is checksum?
  - g Write about digital signature?
  - h Give the main functions of Transport Layer.
  - i. What is Threat?
  - j. Define Data Encryption standard.

**SECTION B**

- 2. Attempt any three of the following: 10 x 3 = 30**
- a What is transmission medium? What are the different types of transmission medium?
  - b What is Network? Explain different types of Networks.
  - c Briefly explain Error Detection methods?
  - d Classify the static and dynamic routing algorithms? Explain the basic concept of flooding.
  - e Differentiate between Symmetric Key Encryption and Asymmetric Key Encryption.

**SECTION C**

- 3. Attempt any one part of the following: 10 x 1 = 10**
- (a) Write short notes on i) STAR , ii)BUS iii)RING iv) MESH topology
  - (b) Differentiate OSI reference model with the TCP/IP reference model
- 4. Attempt any one part of the following: 10 x 1 = 10**
- (a) Explain about HDLC Configurations, Transfer Modes and different types of frames.
  - (b) Define Switching. What are the different types of Switching Techniques?
- 5. Attempt any one part of the following: 10 x 1 = 10**
- (a) Write short notes on i) WDM ii) TDM iii) PPP
  - (b) Define controlled access and list three protocols in this category.
- 6. Attempt any one part of the following: 10 x 1 = 10**
- (a) What is the responsibility Network layer in the TCP/IP protocol
  - (b) Write short notes on
    - i. Stop-and-Wait
    - ii. Go-Back-N
- 7. Attempt any one part of the following: 10 x 1 = 10**
- (a) What are the five basic functions supported in e-mail systems? Explain
  - (b) What are the various threats to Internet?