

**MSCCS-11**  
June - Examination 2016  
**MSCCS (Final) Examination**  
**Data Communication and Networks**  
**Paper - MSCCS-11**

**Time : 3 Hours ]**

**[ Max. Marks :- 100**

**Note:** The question paper is divided into three sections A, B and C. Write answers as per given instructions.

**Section - A**

**10 × 2 = 20**

(Very Short Answer Questions)

**Note:** Answer **all** questions. As per the nature of the question delimit your answer in one word, one sentence or maximum upto 30 words. Each question carries 2 marks.

- 1) (i) What is Thinnet?
- (ii) Which layer is responsible for process to process communication?
- (iii) List the advantages of using optical fibre.
- (iv) What is piggybacking?
- (v) What is the use of PING command in ICMP?
- (vi) Name the layers of TCP/IP model.
- (vii) List the desirable properties of Router.

- (viii) IPv4 uses \_\_\_\_\_ bit address.
- (ix) Give the definition of burst data.
- (x) Name the four general techniques to improve QoS (Quality of Service)

**Section - B****4 × 10 = 40**

(Short Answer Questions)

**Note:** Answer **any four** questions. Each answer should not exceed 200 words. Each question carries 10 marks.

- 2) Compare distance vector and Link-state Routing with suitable example.
- 3) What do you mean by Tunnelling? Explain with example.
- 4) Explain the relation between Transport layer and Network Layer.
- 5) What is the need of Multiplexing and De-multiplexing?
- 6) Write short note on Simple Mail Transfer Protocol (SMTP).
- 7) What is Hamming Code? Demonstrate how the Hamming code is used to correct a single-bit error in the data stream.
- 8) Discuss the applications of ATM (Asynchronous Transfer Mode).
- 9) What is topology? Discuss various type of topology.

**Section - C****2 × 20 = 40**

(Long Answer Questions)

**Note:** Answer **any two** questions. You have to delimit your each answer maximum upto 500 words. Each question carries 20 marks.

- 10) What is Routing? Explain any two routing protocols.
- 11) What are the principles of Cryptography? Discuss some methods used for security in Computer Network.
- 12) What do you mean by protocol stack? Discuss similarities and dissimilarities between OSI reference model and TCP/IP.
- 13) Distinguish between the following:
  - (i) Bridges and Switches
  - (ii) CSMA and CSMA/CD

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