

# CBCS Scheme

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16MCA31

Third Semester MCA Degree Examination, June/July 2018

## Computer Networks

Time: 3 hrs.

Max. Marks: 80

*Note: Answer FIVE full questions, choosing one full question from each module.*

### Module-1

- 1 a. Discuss the responsibilities of each layer on OSI reference model. (10 Marks)  
b. What is a computer network? Define the terms Switch, Router and Hub. (06 Marks)

OR

- 2 a. Explain digital modulation techniques (i) FDMA, (ii) TDMA, (iii) CDMA. (09 Marks)  
b. Explain connection oriented versus connectionless service and their six types of primitives. (07 Marks)

### Module-2

- 3 a. Discuss data link layer design issues. (08 Marks)  
b. Explain sliding window protocols. (08 Marks)

OR

- 4 a. Explain Bluetooth protocol stack. (08 Marks)  
b. Explain static and dynamic channel allocation. (08 Marks)

### Module-3

- 5 a. Compare virtual circuit and datagram networks. (08 Marks)  
b. Explain shortest path algorithm with an example. (08 Marks)

OR

- 6 a. Discuss about link state routing. (08 Marks)  
b. Discuss network layer design issues. (08 Marks)

### Module-4

- 7 a. Explain elements of transport protocols. (13 Marks)  
b. List transport layer primitives. (03 Marks)

OR

- 8 a. Explain state diagram for simple connection management scheme. (08 Marks)  
b. Explain socket primitives for TCP. (08 Marks)

### Module-5

- 9 Give brief notes on:  
a. DNS  
b. SIP and VOIP  
c. Electronic mail (16 Marks)

OR

- 10 a. Explain Server side dynamic webpage generation. (08 Marks)  
b. Explain client side dynamic web page generation. (08 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.