

# CBCS SCHEME

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16/17MCA31

## Third Semester MCA Degree Examination, Dec.2018/Jan.2019 Computer Networks

Time: 3 hrs.

Max. Marks: 80

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

### Module-1

- 1 a. Define Computer Networks. Explain the uses of computer networks in business applications and home applications. (08 Marks)  
b. Explain Local Area Network in detail. (08 Marks)

OR

- 2 a. Describe the architecture of internet with diagram. (08 Marks)  
b. Explain OSI reference model with diagram. (08 Marks)

### Module-2

- 3 a. What is framing? Explain the four framing methods. (08 Marks)  
b. Explain four different error-correcting codes. (08 Marks)

OR

- 4 a. Explain the following :  
i) Simplex stop and wait protocol for error free channel  
ii) Simplex stop and wait protocol for noisy channel. (08 Marks)  
b. Explain the Go-back-N sliding window protocol. (08 Marks)

### Module-3

- 5 a. How connection oriented service is implemented in network layer? (08 Marks)  
b. Discuss about distance vector routing algorithm with suitable network. (08 Marks)

OR

- 6 a. What is congestion control? Discuss the approaches to congestion control. (08 Marks)  
b. Discuss about Broadcast routing in network layer. (08 Marks)

### Module-4

- 7 a. Explain the following :  
i) Nesting of segments, packets and frames  
ii) Socket primitives in TCP (08 Marks)  
b. Write socket programming with respect to internet file server. (08 Marks)

OR

- 8 a. Write short notes on : i) TCP ii) UDP. (08 Marks)  
b. Discuss about the elements of transport protocols. (08 Marks)

### Module-5

- 9 a. Explain the following : i) Domain Name System ii) Electronic Mail. (08 Marks)  
b. Explain the DNS resource record types. (08 Marks)

OR

- 10 a. Discuss about static and dynamic web pages. (08 Marks)  
b. Explain in detail about server farm and web proxies. (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.