CBCS SCHEME

16MCA31

USN

Third Semester MCA Degree Examination, Dec.2017/Jan.2018
Computer Networks

Time: 3 hrs. Max. Marks: 80

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

Important Note : 1. On completing ... 2. Any revealing of identification, appeal to evaluator and /or equations ... Large cross lines on the remaining blank pages. ... treated as malpractice

Module-1

1 a. Explain the uses of computer networks. (10 Marks)
b. Define the terms: (i) Switch (ii) Router (iii) Hub (06 Marks)

OR

2 a. Draw the OSI network architecture. Explain each layer in detail. (10 Marks)
b. Explain TCP/IP reference model. (06 Marks)

Module-2

3 a. Illustrate Nyquist bandwidth and Shannon capacity formula. (10 Marks)
b. Show the NRZ, NRZI and Manchester encoding for the bit pattern 10000101111. (06 Marks)

OR

4 a. Explain the co-axial cable and optical fiber with a neat diagram and with their applications. (10 Marks)
b. Explain different types of transmission impairments. (06 Marks)

Module-3

5 a. Explain the Token-bucket algorithm in detail. List its differences with Leaky-bucket algorithm. (08 Marks)
b. With an example, explain distance vector routing algorithm. (08 Marks)

OR

6 a. Explain IPv4 header along with a neat diagram. (10 Marks)
b. Discuss IPv6 header format with a diagram. (06 Marks)

Module-4

7 a. Explain TCP header with a neat diagram. (10 Marks)
b. Explain Real-Time transport protocol. (06 Marks)

OR

8 a. Explain three way hand shake with the help of a neat diagram. (10 Marks)
b. Explain the packet format of UDP. (06 Marks)

Module-5

9 a. Explain the architecture of the e-mail system. (10 Marks)
b. Write a short note on DNS. (06 Marks)

OR

10 a. Explain server forms and web proxies. (10 Marks)
b. Explain WWW. (06 Marks)

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