

16543(D) - 0 DEC 2016

MCA 2nd Semester Examination

Computer Networks (NS)

MCA-205

Time : 3 Hours

Max. Marks : 60

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt five questions in all. Select one question from each section A, B, C and D. Section E is Compulsory. All questions carry equal marks.

SECTION - A

1. (a) What is OSI reference model? Explain the functions of each layer.
(b) Describe the working of W-LAN. (7+5=12)
2. (a) Describe briefly the types of attacks on Computers. What are the principles of securing Computer Systems from malicious activities?
(b) Discuss the cryptographic approach followed by AES algorithm. (6+6=12)

SECTION - B

3. (a) What are mobile telephone systems? Explain the factors affecting data rate of channel.
(b) Differentiate between Go-Back-N ARQ & Stop and Wait ARQ. (7+5=12)
4. (a) Discuss the key features of MA, CSMA and CSMA/CD protocols.
(b) Compare and contrast IEEE 802.3, 802.4 and 802.5. (5+7=12)

SECTION - C

5. (a) Explain the working of link state routing by taking an example.
(b) Discuss congestion control in virtual circuit & datagram sub-networks. (6+6=12)
6. Describe the following by taking an example:
(a) Fragmentation
(b) BGP (6+6=12)

SECTION - D

7. Write a short note on the following:
(a) FTP
(b) WWW
(c) RPC
(d) HTTPS (4×3=12)
8. (a) Discuss various tools for monitoring and measuring the performance of network.
(b) Describe the concept of concurrent servers using threads or processes. (6+6=12)

SECTION - E

9. Write a short note on the following:
(a) Linux servers.
(b) Client Server using RPC.
(c) RSA.
(d) IEEE 802.15.
(e) Internet Radio.
(f) Token Passing Algorithm. (6×2=12)