[Total No. of Questions - 9] [Total No. of Printed Pages - 2]
(2063)

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MCA 2nd Semester Examination

Computek Networks

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 selecting one question from the sections A, B, C and D. Section E is compulsory.

SECTION - A

1. What is OSI Reference Model? Discuss the function of each layer of the model.

2. What is public key cryptography? What is its advantage over secret key cryptography? Explain the working of RSA.

SECTION - B

3. What is Wireless networking? What is IEEE 802.11 LAN standard? Discuss protocol stack, physical layer and MAC sublayer of IEEE 802.11 LAN standard.

4. What is HDLC protocol? What is the structure of HDLC frame? Explain each fields in detail.

SECTION - C

5. What do you mean by congestion? What are various congestion control algorithms in datagram subnets?

6. What are various classes of IPv4? How subnetting is done with IPv4? Explain by taking an example.

SECTION - D

7. What is DNS? What are various methods of name resolution? What is a resource record in DNS? Explain the function of its various fields.

8. What is TCP and UDP? What are the various service primitives of TCP and UDP? Explain each.

SECTION - E

9. Fill in the blanks:
   (i) Internet is an example of _____ switched network.
   (ii) DES makes use of _____ bit key.
   (iii) Bluetooth operates in _____ ISM band.
   (iv) Each FDM band of GSM is divided in _____ TDM bands.
   (v) In HDLC protocol _____ is used as flag.
   (vi) Minimum frame length of HDLC is _____ bits.
   (vii) Retransmission policy at _____ layer can help preventing congestion.
   (viii) Count-toInfinity problem is found in _____ routing algorithm.
   (ix) _____ is a loopback address.
   (x) IPv6 adress is _____ bytes long.
   (xi) A DNS resource record has _____ fields.
   (xii) SMTP runs at TCP port _____.