Roll No. ....

67114

MCA 3rd Semester (With Old Notes)

Examination – December, 2016

DATA COMMUNICATION & COMPUTER NETWORK

Paper : MCA-304

Time : Three Hours] *[Maximum Marks : 80*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : There shall be 8 questions in all, 2 from each Unit and carrying equal marks, and the candidate will be required to attempt 5 questions in all, selecting at least *one* from each Unit.

UNIT – I

1. (i) What are the three criteria necessary for effective and efficient networks ? 4

(ii) What is the difference between a simple periodic signal and a composite periodic signal ? 4

(iii) Compare the two method of serial transmission. Discuss the advantages and disadvantages of each. 6

(iv) How is baud rate related to transmission bandwidth in PSK ? 2

2. (i) How does NRZ-L differ from NRZ-I ? 4

(ii) What is the purpose of cladding in an optical fibre ? Discuss its density relative to the core. 6

(iii) How is WDM similar to FDM ? How are they different ? 6

UNIT – II

3. (i) Explain each of the word in "Integrated Services Digital Network." 4

(ii) Why is the control field from HDLC totally dropped from frame Relay ? 6

(iii) How is a repeater different from an amplifier ? 6

4. (i) How is an IDN different from ISDN ? 4

(ii) How does a data link layer switch increase the efficiency of a computer ? 6

(iii) How does the frame layer address field differ from the HDLC address field ? 6

UNIT – III

5. (i) Why is flow control needed ? 5

(ii) Discuss the difference between communication and transmission. 5

(iii) In HDLC, what is bit stuffing and why is it needed ? 6

6. (i) How is DQDB related to SMDS ? 6

(ii) What is the purpose of the SMDS interface protocol (SIP) ? 6

(iii) What is the mechanism of ENQ/ACK ? 4

UNIT – IV

7. (i) How is blocking related to a multistage switch ? 6

(ii) Which is more efficient circuit switching or virtual circuit switching ? Why ? 6

(iii) How is masking related to subnetting ? 4

8. (i) What is the purpose of ARP, RARP, ICMP and IGMP ? 6

(ii) How can a device have more than one IP address ? 5

(iii) How are HTTP and the WWW related to the Internet ? 5
