7. (a) What is the purp 'SMSD interface protocol (SIP)? 6

(b) What are the adv :s of implementing DQDB in a ring configu ? 6

(c) Which sliding w v ARQ is more popular ? Why? 4

U

8. (a) What are the tw ular approaches to packet switching? 6

(b) How can the FI it inform the receiver of congestion in the ork ? 4

(c) What is the pu of subnetting ? How is masking related netting ? 6

9. (a) What is the limit ctor in a crossbar switch ? How does a m ge switch alleviate the problem? 6

(b) Relate the TCP/ plication layer to its OSI model equivalen 6

(c) A message is bro into three pieces. Discuss the transmission packets using a switched virtual circuit. 4

MCA 3rd Semester Current Scheme with new notes

Maximum Marks Scheme 80

Examination, December–2015

DATA COMMUNICATIONS AND COMPUTER NETWORKS

Paper–MCA-304

Time allowed : 3 hours] *[Maximum marks : 80*

Note : ***Question No. 1 is compulsory.*** *Attempt* ***four*** *questions by selecting* ***one*** *question from each unit. All questions carry equal marks.*

1. (a) Why are protocols needed ?
   (b) What is purpose of the dialog controller ?
   (c) How is QAM related to ASK and PSK ?
   (d) What is the purpose of LCN ?
   (e) Name the five categories of U-frames.
   (f) What is a crosspoint in a crossbar switch ?
   (g) Compute the baud rate for a 72,000 bps 64-QAM signal.
   (h) A signal has been received that only has values of –1, 0 and 1. Is this an analog and digital signal ? 8×2

Unit–I

2. (a) List several transmission media for networking. Explain any two media in brief. 4

(b) What is major d antage in using NRZ encoding ? How encoding and biphase encoding attempt t e the problem ? 6

(c) Describe the layers atmosphere. What types of radio communic utilize each ? 6

3. (a) A light beam trav a less dense medium. What happens to th in each of the following cases ?

(i) The incident is less than the critical angle.

(ii) The incident is equal to the critical angle.

(iii) The incident a greater than the critical angle. 6

(b) What is the formu alculate the number of redundancy bits rec to correct a bit error in a given number of da ? 6

(c) Give a disadvanta each type of network topology. 4

Unit

4. (a) What is the limitin or in the size of a bus network topology ? e a discussion of taps in your answer. 6

(b) Do all control packets consist of just a header field ? Give an example of a control packet with a non header-type field. Give an example of a control packet with just a header field. 6

(c) What is the difference between a service point address, a logical address and a physical address ? 4

5. (a) What is the difference between a simple bridge and a transparent bridge ? 5

(b) What is the relationship between the ISDN layers and the OSI model layers ? 5

(c) Who are the subscribers to a BRI ? Who are the subscribers to a PRI ? 6

Unit–III

6. (a) What are the two types of sliding window ARQ error control ? How do they differ from one another ? 8

(b) Describe the line configuration, transmission mode, and flow and error control methods used by BSC. 8