GSQ/M-20   **1767**

COMPUTER SCIENCE

Paper II

Computer Networks

Time : Three Hours]   [Maximum Marks : 40

Note : Attempt *Five* questions in all. Q. No. **1** is compulsory. In addition to compulsory question, student will have to attempt *four* more questions, selecting *one* question from each Unit. All questions carry equal marks.

(Compulsory Question)

1. (a) Explain the terms : Hub and Switch.   **2**

    (b) Differentiate between Guided and Unguided Transmission Media.   **2**

    (c) Write a short note on Ethernet.   **2**

    (d) Write a short note e-Mail and WWW Services. **2**

Unit I

2. (a) Define Computer Network. Explain various types of Computer Networks.   **5**

    (b) Draw labelled diagram of TCP/IP Protocol.   **3**

3. Explain OSI reference model in detail. Also discuss its advantages and disadvantages. **8**

Unit II

4. Explain various Modulation Techniques. **8**

5. What do you understand by multiplexing ? Explain different types of multiplexing techniques. **8**

Unit III

6. Explain the following :
(a) ALOHA Protocol
(b) Sliding Window Protocol. **8**

7. Explain various design issues of Data Link Layer. Elaborate on Error Detection and Correction methods. **8**

Unit IV

8. Which layer supports routing ? Discuss various routing algorithms with the help of examples. **8**

9. Explain various Network Security issues. **8**