

**M.Sc. (Part-I) Semester-I (C.B.C.S. Scheme) Examination**

**COMPUTER SOFTWARE (New)**

**(Computer Networks)**

**Paper-1 MCSW 4**

Time : Three Hours]

[Maximum Marks : 80

**Note :—** Attempt all questions.

1. (a) What are the different modes of data transmission ? Explain serial mode of data transmission. 7
- (b) Explain the functions of different layers of OSI Network Reference model. 8

**OR**

2. (a) What is Packet Switched Network ? Explain working of circuit switched and message switched. 8
- (b) Explain the various unguided communication media in detail. 7
3. (a) Draw the layered Architecture of client-server model explain in detail. 7
- (b) Explain various types of HTTP connections. 6

**OR**

4. (a) What is DNS ? Explain services and working of DNS. 7
- (b) What is FTP ? Explain the FTP commands with example. 6
5. (a) Explain the services provided by UDP in detail. 7
- (b) Explain the principles of TCP congestion control with example. 6

**OR**

6. (a) Explain stop-and-wait and pipelined data transfer protocol. 7
- (b) What is Flow control ? Explain in detail with example. 6

7. (a) What is Routing ? Explain Routing algorithm in detail. 7  
(b) State and explain IPV6 and Internet protocol in detail. 6

**OR**

8. (a) Explain the working of RIP in detail. 7  
(b) Write short notes on :  
(1) BGP  
(2) OSPF. 6
9. (a) Explain the IEEE 802.11 standard for wireless LAN. 7  
(b) Write short notes on :  
(1) HUB  
(2) SWITCHES. 6

**OR**

10. (a) Explain parity checking and longitudinal redundancy checking techniques. 7  
(b) Describe media access control in detail. 6
11. (a) What is Network Management ? Describe various areas of network management. 7  
(b) Write short notes on :  
(1) SMI  
(2) SMMP. 6

**OR**

12. (a) What is Digital Signature ? Write procedure for creating a digital signature. 7  
(b) What is symmetric key cryptography ? Explain with neat diagram. 6