

**SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH/APRIL 2018**

(CUCBCSS—UG)

Computer Science

BCS 6B 14—COMPUTER NETWORKS

Time : Three Hours

Maximum : 80 Marks

I. Answer *all* questions. Each question carries 1 mark :

- 1 CSMA stands for \_\_\_\_\_.
- 2 \_\_\_\_\_ is the connectionless, unreliable transport protocol.
- 3 \_\_\_\_\_ is a client server general purpose application program for remote logging.
- 4 If the physical links are shared by more than two nodes, it is said to be Multiple Access.
- 5 The minimum number of wires needed to send data over a serial communication layer is \_\_\_\_\_.
- 6 The data unit in the TCP/IP application layer is called \_\_\_\_\_.
- 7 \_\_\_\_\_ is designed to provide communications between two mobile stations or between one mobile unit and one land unit.
- 8 The algorithm that manages the tables and makes the routing decisions is called \_\_\_\_\_.
- 9 The number of bits in an IPV4 address is \_\_\_\_\_.
- 10 SMTP stands for \_\_\_\_\_.

(10 × 1 = 10 marks)

II. Answer *all* questions. Each question carries 2 marks :

- 11 How does a single bit error differ from burst error ?
- 12 How is a hub related to a repeater ?
- 13 What are the two flow control mechanisms used in data link layer ?
- 14 What are different types of errors that will occur in data transmission ?
- 15 What do you mean by congestion ?

(5 × 2 = 10 marks)

III. Answer any *five* questions. Each question carries 4 marks :

- 16 Explain error detection and error correction with the help of an example.
- 17 What is NAT ? How can NAT help in address depletion ?

Turn over

- 18 Explain CSMA and its uses.
- 19 What is a mask in IPV4 addressing ? What is the default mask in IPV4 ?
- 20 What is the need of cryptography ?
- 21 Explain distance vector routing.
- 22 What do you mean by remote procedure call ?
- 23 Discuss the four basic topologies in terms of line configuration.

(5 × 4 = 20 marks)

IV. Answer any *five* questions. Each question carries 8 marks :

- 24 Compare IPV4 and IPV6 addressing.
- 25 Explain the bluetooth architecture and applications in detail.
- 26 Discuss about different internetworking devices.
- 27 Explain different Routing algorithms.
- 28 Compare flow control and error control in detail.
- 29 Describe the two groups of multicast routing protocols.
- 30 Explain about the application layer services.
- 31 Write notes on the following :
  - (a) FTP.
  - (b) TFTP.
  - (c) SMTP.
  - (d) POP.

(5 × 8 = 40 marks)