(6 pages)

Reg. No. : .....

Code No. : 20996 **Sub. Code : GMCS 62**
GMSE 6

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 201

Sixth Semester

Computer Science/Software Engg. — Main

COMPUTER NETWORKS AND DATA COMMUNICATIONS

(For those who joined in July 2012 -2015)

Time : Three hours Maximum : 75 mark

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Transmission channel transports _____ signals from the transmitte the receiver.

(a) pulse (b) digital

(c) electrical (d) none of these

Which of the following is prefix code _____?

(a) x_0, x_1 (b) $0x, x_1$

(c) $0, x_1$ (d) none of these

Which of the following connection oriented phase _____.

(a) Data transfer

(b) Connection establishment

(c) Connection release

(d) All of the above

"Binary 1 may be received as a binary O" _____this error called as .

(a) Flow (b) Content

(c) Syntax (d) None of these

Error control carried out by _____ layer.

(a) data (b) physical

(c) network (d) session

6. BISYNC supports the following co———————.

(a) ASCII (b) EBCDIC

(c) Transcode (d) All of these

7. A———————— is needed to expand geograph coverage of an Ethernet LAN.

(a) Repeater (b) Topology

(c) Protocol (d) None of these

8. Slotted ALOHA is a ———————— algorithm.

(a) connection (b) collision

(c) throughput (d) all of these

9. ———————— layer is between the applicat and the TCP layer.

(a) SSL (b) DES

(c) RSA (d) None of these

10. Security mechanisms can be built is ——— layer.

(a) Transport (b) Network

(c) (a) and (b) (d) None of these

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) What do you mean by unipolar and polar words line codes? Explain its levels.

Or

(b) Explain in details about Metallic transmission media.

12. (a) Write in details about check sum error detection method.

Or

(b) Write about other layered architectures.

13. (a) Write in details about frame design considerations.

Or

(b) What are the service provided to data link layer by physical layer?

14. (a) Discuss about layered architecture LAN.

Or

(b) Explain slotted ALOHA.

15. (a) Write and explain public key encryption algorithm.

Or

(b) Discuss about Firewalls.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Discuss about modes of data transmission.

Or

(b) Write in details about optical fibre.

17. (a) Discuss about parity checking error detection method.

Or

(b) Discuss about OSI reference layer model.

18. (a) Discuss in details about sliding window flow control.

Or

(b) Discuss about BISYNC frame format.

19. (a) Explain in details about LLC sub layer.

Or

(b) Write in details about CSMA collision avoid method.

20. (a) Write in details about IP security.

Or

(b) Suppose you are using RSA encryption with $p = 7$ $q = 11$ and $e = 7$. Find decryption key d.
