

(6 pages)

Reg. No. :

Code No. : 20996

Sub. Code : GMCS 62/
GMSE 62

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2016.

Sixth Semester

Computer Science — Main

COMPUTER NETWORKS AND DATA
COMMUNICATIONS

(For those who joined in July 2012 and afterwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. The operation of setting up a session between two processors is called _____.
(a) binding (b) session
(c) packets (d) frames.
2. The hardware equipment called _____ is used to regenerate the digital signal.
(a) Encoder (b) Repeater
(c) Multiplexer (d) Timer.

3. _____ codes can only correct single errors.

(a) Hamming (b) Binary
(c) Single (d) None.

4. The ability of the receiver to both detect and correct errors is known as

(a) Backward error correction
(b) Forward error detection
(c) Forward error correction
(d) Reverse error correction.

5. _____ is a physical layer standard.

(a) ISO 2110 (b) EIA – 25
(c) ITU – 71 (d) X – 80.

6. Flow control is incorporated in the

(a) Physical layer
(b) Data Link layer
(c) Network layer
(d) Session layer.

Page 2

Code No. : 20996



7. In OSI model, the _____ layer is responsible for routing a packet within the subnet.
(a) application (b) session
(c) network (d) physical.
8. The main functions of the _____ layer are to establish, maintain and synchronize the interaction between two communicating hosts.
(a) session (b) network
(c) physical (d) presentation.
9. 100 Base T2 support _____
(a) Half duplex
(b) Full duplex
(c) Both
(d) None.
10. _____ is used for authenticating messages.
(a) Digital signature (b) Wires
(c) CGA (d) Avalanche.

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b), in about 250 words each.

11. (a) Compare and contrast FDM with TDM.
Or
(b) Write a short notes on data communications, protocols and standards.
12. (a) Discuss about transmission error.
Or
(b) Explain data transfer modes.
13. (a) What is relaying function in the physical layer? Explain.
Or
(b) Explain datalink protocol.
14. (a) Write in detail about flow control.
Or
(b) Define and explain Gigabit Ethernet.
15. (a) Discuss about Digital signature.
Or
(b) Explain fire walls.



PART C — (5 × 8 = 40 marks)

**Answer ALL questions, choosing either (a) or (b),
in about 600 words each.**

16. (a) Explain :

- (i) Data compression
- (ii) Data communication.

Or

(b) Describe transmission ion line characteristics.

**17. (a) Explain in detail the layered architecture of
the OSI Reference model.**

Or

**(b) Discuss in details about error correction and
error detection.**

**18. (a) Write about functions within the physical
layer.**

Or

**(b) What is Data Link layer? Explain its error
control.**

19. (a) Define and explain

- (i) LLC sub layer
- (ii) MAC sub layer.

Or

(b) What is Ethernet? Explain Fast Ethernet.

Page 5 Code No. : 20996

20. (a) Explain algorithms for confidentiality.

Or

(b) What is IP Security? Explain with example.

Page 6 Code No. : 20996

