

Total No. of printed pages = 5

**END SEMESTER/RETEST EXAMINATION-2022**

Semester : 5th (New/Old)

Subject Code : CO-502

**COMPUTER COMMUNICATION  
AND NETWORKING**

Full Marks – 70

Time – Three hours

The figures in the margin indicate full marks  
for the questions.

**Instructions :**

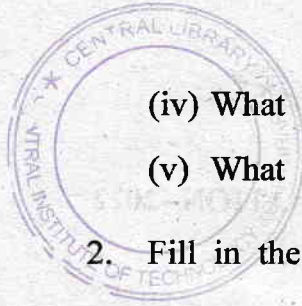
- (i) *All* questions of PART-A are compulsory.
- (ii) Answer any *five* questions from PART-B.

**PART – A**

Marks – 25

1. Answer in *one* sentence each : 1×5=5
- (i) What is the main goal of Networking ?
  - (ii) What is the purpose of physical layer ?
  - (iii) What are the two parts of data link layer ?

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(iv) What is the full form of CSMA/CD ?

(v) What is IEEE ?

2. Fill in the blanks : 1×10=10

(i) Fiber Optics works on the properties of \_\_\_\_\_ light.

(ii) In \_\_\_\_\_ network all nodes are connected to a special central node.

(iii) Microwaves travels in \_\_\_\_\_ lines.

(iv) In \_\_\_\_\_ switching, to transfer the data, circuit must be established so that the data transfer can take place.

(v) In \_\_\_\_\_ ALOHA Users transmit whenever they have data to be sent.

(vi) IEEE standard \_\_\_\_\_ is used by token ring.

(vii) Checksum is used for error \_\_\_\_\_.

(viii) CRC is based on binary \_\_\_\_\_.

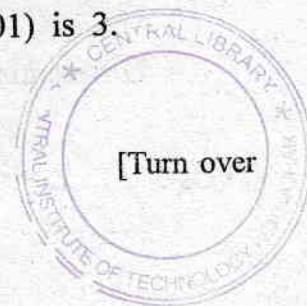
(ix) Data encryption and decryption are the functions of \_\_\_\_\_ layer.

(x) When displaying a web page, the application layer uses the \_\_\_\_\_ protocol.

3. Write true or false :  $1 \times 10 = 10$

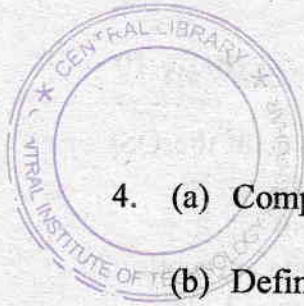
- (i) Session layer is the thinnest layer in the OSI model.
- (ii) Huffman encoding is used for data encryption.
- (iii) The DNS translates internet domain and host names to MAC address.
- (iv) Application layer protocols are used by both source and destination devices during a communication session.
- (v) Full form of SSL is secure socket layer.
- (vi) Packets are found at datalink layer.
- (vii) UDP is a reliable service.
- (viii) 802.11 is the collection of standards setup for wireless networking.
- (ix) Hamming code can be applied to data units of any length.
- (x) The hamming distance between two pair of words  $d(1010101, 1111101)$  is 3.

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**PART – B**

Marks – 45

4. (a) Compare OSI model and TCP/IP model. 3  
(b) Define protocol. 2  
(c) What are the various types of transmission media? 4
5. (a) Write about the Fibre optic cable. 3  
(b) Write the functions this of physical layer. 3  
(c) What is switching? What are the different types of switching method? 3
6. (a) Explain pure ALOHA with diagram. 4  
(b) What is sliding window protocol? 2  
(c) Write about CSMA. 3
7. (a) What are the causes of errors? 2  
(b) Explain the different types of errors in brief. 4  
(c) Write about CRC or checksum. 3
8. (a) What are the different classes of IP address? 5  
(b) Differentiate between TCP and UDP. 4

9. (a) What are the design issue of network layer ? 4  
(b) Explain in brief the distance vector routing algorithm. 5
10. (a) Explain one congestion control algorithm. 5  
(b) What are the functions of session layer ? 3  
(c) Why data compression is necessary ? 1

