B.E. Electrical (Electronics & Power) Engineering (Model Curriculum) Semester-VIII

OEC-5-3 : Computer Networks

P. Pages : 2 **GUG/W/23/14353**

Time : Three Hours * 7 8 9 2 * Max. Marks : 80

Notes : 1. All questions are compulsory.
2. All questions carry equal marks.
3. Assume suitable data wherever necessary.

1. a) With help of suitable diagram explain ISO-OSI reference model and compare it with TCP/IP model. **8**

b) Explain in detail. **8**

i) Simplex stop & wait protocol.

ii) Error and flow control.

OR

2. a) What are different design issues of data link layer? **8**

b) Explain in detail ATM (Asynchronous Transfer Mode) Network. **8**

3. a) What is framing? List all methods used for framing and explain any two methods used for framing in details. **8**

b) Explain transition states of point to point protocol. **8**

OR

4. a) Identify the purpose, features and functions of the following network components. **8**

i) Connectors.

ii) Trans receivers

iii) Repeaters

iv) NICs (Network Interface Card).

b) Explain the frame format of HDLC in detail. **8**

5. a) Explain in detail connection-less services implementation in Network Layer. **8**

b) Compare Virtual-Circuit & Datagram Subnet. **8**

OR

6. a) What is routing algorithm? Explain its properties and types. **8**

b) Explain: **8**

i) Internetworking

ii) Firewall.

7. a) Explain CSMA/CD and CSMA/CA techniques. **8**

b) Explain the concept of socket and socket programming. **8**

OR

8. a) Explain fast ethernet and gigabit Ethernet. **8**

b) Explain three handshake protocol to establish a TCP connection. **8**

9. a) Explain in detail about Electronic mail system. **8**

b) How POP works? What are advantages of IMAP over POP. **8**

OR

10. a) Write short note on XML and XSL. **8**

b) Write short note on **any four**. **8**

i) Domain name system.

ii) Electronic Mail.

iii) Digital Signature.

iv) World Wide Web.

v) Multimedia.

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