

**OEC-5-3 - Computer Networks**

P. Pages : 2

Time : Three Hours



**GUG/S/25/14353**

Max. Marks : 80

- Notes :
1. All questions carry equal marks.
  2. Assume suitable data wherever necessary.
  3. Illustrate your answers wherever necessary with the help of neat sketches.
  4. All questions are compulsory.

- 1.** a) Draw and explain the OSI reference model in details. **8**
- b) What is computer network? Explain its application. **8**

**OR**

- 2.** a) What types of cable media used in Networking? Explain with neat sketches of each. **8**
- b) Write a short note on HDLC (High Level Data Link Control) protocol. **8**
- 3.** a) What is collision free protocols? Explain any two in details. **8**
- b) Discuss about static and dynamic channel allocation. **8**

**OR**

- 4.** a) Write a short note on- **8**
- i) CSMA/CD
- ii) CSMA/CA
- b) Define switching and also explain its types. **8**
- 5.** a) What is Routing Algorithm? Explain its properties. **8**
- b) Compare Virtual Circuit and Datagram network. **8**

**OR**

- 6.** a) Discuss shortest path routing and flooding in network layer. **8**
- b) Write a short note on connection-oriented and connectionless services in network layer. **8**

- 7.** a) What is the purpose of three-way handshake process in TCP? Explain in details. **8**
- b) Discuss the concept of socket and socket programming. **8**

**OR**

- 8.** a) Write a short note on UDP and its header. **8**
- b) Describe the concept of Remote procedure call. **8**
- 9.** a) What is the role of HTTP protocol? Explain briefly. **8**
- b) Write a short note on-  
i) Digital Signature  
ii) DNS **8**

**OR**

- 10.** a) Draw and explain Browser Architecture. **8**
- b) Write a short note on following with respect to World Wide Web. **8**
- i) URL (Uniform Resource Locator)  
ii) HTML (Hyper Text Markup Language)

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