

PARUL UNIVERSITY
FACULTY OF IT & COMPUTER SCIENCE
MCA., Winter 2017 – 18 Examination

Semester: 4**Subject Code: 05201253****Subject Name: Data Communications and Networking****Date: 10/01/2018****Time: 02:00PM to 04:30PM****Total Marks: 60****Instructions:**

1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.

Q.1 Answer the followings.**A. Write short notes.****(05)**

1. Define Computer Network.
2. What is MAC address?
3. What is ARP?
4. What is Hub?
5. What is Switch?

B. Multiple choice type questions/ Give the sentence true or false. (Each of 01 marks)**(10)**

1. Which of the following condition is used to transmit two packets over a medium at the same time?
A. Contention B. Collision
C. Synchronous D. Asynchronous
2. Which of the following is used for modulation and demodulation?
A. modem B. protocols
C. gateway D. multiplexer
3. A distributed network configuration in which all data/information pass through a central computer is
A. bus network B. star network
C. ring network D. Point-to-point network
4. The slowest transmission speeds are those of
A. twisted-pair wire B. coaxial cable
C. fiber-optic cable D. microwaves
5. _____ bits is size of IPv4.
A. 32 B. 128
C. 64 D. 4
6. _____ is Port number of HTTP.
A. 51 B. 3156
C. 36 D. 80
7. A set of rules that governs data communication
A. Protocols B. Standards
C. RFCs D. None of the mentioned
8. The number of layers in Internet protocol stack
A. 7 B. 5
C. 6 D. None of the mentioned
9. OSI stands for
A. open system interconnection B. operating system interface
C. optical service implementation D. none of the mentioned

10. Which layer provides the services to user?

- A. application layer
- B. session layer
- C. presentation layer
- D. none of the mentioned

Q.2 Answer the followings. (15)

- 1. Discuss function of Datalink layer. **03**
- 2. Explain DNS with example. **02**
- 3. Difference between IPv4 and IPv6. **03**
- 4. Explain Frequency Division Multiplexing. **02**
- 5. Explain Time Division Multiplexing. **02**
- 6. Error detection and correction in datalink layer **03**

Q.3 Answer the following. (Any three) (15)

- 1. Compare OSI model and TCP/IP model.
- 2. Write a note on wireless transmission.
- 3. Discuss function of Transport layer.
- 4. Explain OSI layer in detail with diagram.

Q.4 Answer the following.

- A.** Write a short note on: Frequency Division Multiplexing and Time Division Multiplexing. **(05)**
- B.** Explain Computer network topologies. **(10)**

OR

- B.** Explain types of computer network in detail. **(10)**