

**PARUL UNIVERSITY**  
**FACULTY OF ENGINEERING & TECHNOLOGY**  
**B.Tech. Summer 2018 - 19 Examination**

**Semester: 7**  
**Subject Code: 03107401**  
**Subject Name: Data Communication and Networking**

**Date: 08/05/2019**  
**Time: 10:30 am to 01:00pm**  
**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 Objective Type Questions - (All are compulsory) (Each of one mark) (15)**

1. In a \_\_\_\_\_ relationship, the link is shared equally between devices.  
[a] peer-to-peer [c] primary-secondary  
[b] point-to-point [d] master-slave
2. IPv4 address is \_\_\_\_\_ bit.  
[a] 8 [c] 32  
[b] 16 [d] 64
3. Network of networks is known as \_\_\_\_\_.  
[a] LAN [c] intranet  
[b] WAN [d] internet
4. Which one of the following is not a function of network layer ?  
[a] routing [c] congestion control  
[b] inter-networking [d] none of the above
5. For large networks \_\_\_\_\_ topology is used.  
[a] star [c] ring  
[b] bus [d] irregular
6. Repeater operates in \_\_\_\_\_ layer of the OSI model.
7. MODEM stands for \_\_\_\_\_.
8. UDP is part of \_\_\_\_\_ layer.
9. The range of class B - IP address is \_\_\_\_\_.
10. The full name of HTTP is \_\_\_\_\_.
11. TELNET protocol of TCP/IP is used for remote terminal connection service. [TRUE or FALSE]
12. In OSI reference model, Transport layer provides error free delivery of data. [TRUE or FALSE]
13. The physical layer makes routing decisions. [TRUE or FALSE]
14. Multi-path routing can be achieved in distance vector algorithm. [TRUE or FALSE]
15. The network layer has classified in 3 IP address classes. [TRUE or FALSE]

**Q.2 Answer the following questions. (Attempt any three) (15)**

- A) Explain the Network Topology in detail.
- B) Explain and compare distance vector routing and link state routing algorithm.
- C) Write short note on FTP.
- D) Explain the concept of Cellular Internet Access.

**Q.3 A) Explain the Domain Name System. (07)**

- B) What is cryptography? List & explain its types. (08)

**OR**

- B) Explain Digital Signature. (08)

**Q.4 A) List the various duties of the transport layer and explain each in brief. (07)**

**OR**

- A) List the classification of network in detail according to the area covered. Explain each classification of network. (07)

- B) Draw and explain the OSI reference model for networks. Compare OSI reference model TCP/IP. (08)