

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

Semester: 5**Subject Code: 03105301****Subject Name: Data Communication Networks****Date: 23/05/2019****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**(15)**

1. Communication between a computer and a keyboard involves _____ transmission
 - a) Automatic
 - b) Half-duplex
 - c) Full-duplex
 - d) Simplex
2. A _____ is a device that forwards packets between networks by processing the routing information included in the packet.
 - a) bridge
 - b) firewall
 - c) router
 - d) all of the mentioned
3. This layer is an addition to OSI model when compared with TCP IP model
 - a) Application layer
 - b) Presentation layer
 - c) Session layer
 - d) Both Session and Presentation layer
4. The sharing of a medium and its link by two or more devices is called _____.
 - a) Fully duplexing
 - b) Multiplexing
 - c) Both Fully duplexing and Multiplexing
 - d) None of the mentioned
5. Physical or logical arrangement of network is
 - a) Topology
 - b) Routing
 - c) Networking
 - d) None of the mentioned
6. A _____ is a component used to transfer data in terms of signals in the network.
7. A _____ is the set of rules that governs data communication.
8. A _____ address identifies a process on a host.
9. In _____ topology there is a central controller or hub.
10. File transfer is the service provided by _____ layer.
11. A repeater is a device that receives a radio signal, strengthens it, and sends it on. **True/False**
12. Wireless communications media transmits information over a closed, connected path. **True/False**
13. A WAN covers a large geographic distance, such as a state, a country, or even the entire world. **True/False**
14. Coaxial cable (coax) has one central wire surrounded by insulation, a metallic shield, and a final case of insulating material. **True/False**
15. A bit is the smallest unit of information that a computer can work with. **True/False**

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

(15)

- A) What is network topology? Explain network topology with an example.
- B) What is Network? Explain LAN, MAN and WAN in brief.
- C) Explain guided and unguided transmission media.
- D) Define the following: -
 - Attenuation
 - Distortion
 - Noise
 - Throughput
 - Delay
 - Bandwidth

Q.3 A) Draw and explain OSI model with function of each of layers.

(07)

B) What is Multiplexing? Explain different types of Multiplexing.

(08)

OR

B) Explain stop and wait ARQ protocol in brief.

(08)

Q.4 A) Explain in brief Distance Vector Routing algorithm.

(07)

OR

A) Draw and explain architecture of WWW.

(07)

B) Write a short note on pure ALOHA and slotted ALOHA.

(08)