

PARUL UNIVERSITY
FACULTY OF ENGINEERING & TECHNOLOGY
B.Tech. Winter 2021 - 22 Examinations

Semester: 4
Subject Code: 203105255
Subject Name: Computer Networks

Date: 19/10/2021
Time: 10:30am 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. Which three commands can be used to check LAN connectivity problems on a router?
1. Show interfaces 2. Show ip route 3. Tracert 4. Ping 5. Dns lookups
 - a. 1, 2 and 4
 - b. 2 and 5
 - c. 3 and 5
 - d. None of the above
2. The term that refers to a set of procedures used to restrict the amount of data that the sender can send before waiting for acknowledgment is
 - a. Error control
 - b. Flow control
 - c. Delay
 - d. Byte stuffing
3. Error Control and Flow Control are the responsibilities of
 - a. Network Layers
 - b. Physical Layer
 - c. Presentation Layer
 - d. Data link
4. For Stop-and-Wait ARQ, for 5 data packets sent, _____ acknowledgments are needed.
 - a. 5
 - b. 4
 - c. 6
 - d. Variable
5. The Stop-And-Wait ARQ and Go-Back-N ARQ are for _____ channels.
 - a. Noisy
 - b. Noiseless
 - c. For either 1 or 2
 - d. For neither 1 nor 2
6. The physical layer is concerned with _____.
7. _____ transmission media provides the highest transmission speed in a network.
8. A 4 byte IP address consists of _____.
9. In virtual circuit network each packet contains _____.
10. The technique of temporarily delaying outgoing acknowledgements so that they can be hooked onto the next outgoing data frame is called _____.
11. What is computer network?
12. What is the work of network layer?
13. Write down the name of noiseless protocols.
14. What do you mean by hamming code?
15. Explain the term WWW.

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

- A) The message 11001001 is to be transmitted using the CRC polynomial $x^3 + 1$ to protect it from errors. Which message should be transmitted?
- B) What are the different Guided media? Explain.
- C) What do you mean by ARP?
- D) Define Routing? Explain any one routing technique?

- Q.3** A) What is ALOHA? Explain Slotted ALOHA. (07)
B) The address of a class B host is to be split into subnets with a 6-bit subnet number. What is the maximum number of subnets and the maximum number of hosts in each subnet? (08)
- OR**
- B) What is Sub netting? Explain with the help of example. (08)
- Q.4** A) Explain OSI model and the working of each layer? (07)
- OR**
- A) Draw IP header (IPV4) and explain the each field of the header. (07)
B) What is Flow Control? Explain Stop and Wait ARQ? (08)