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SARDAR PATEL UNIVERSITY
B.Sc.[IT] EXAMINATION, 6th SEMESTER
Friday, 6th April, 2018
10:00 a.m. to 1:00 p.m.
US06CINT06

[Data Communication and Networking]

Maximum Marks: 70

Q-1 Multiple Choice Question.[Each Question carries one Mark] [10]

- 1) Traditional LANs run at speeds of _____ to _____ Mbps.

a. 20 to 100	b. 10 to 1000
c. 100 to 1000	d. 10 to 100

- 2) A _____ is a data communication system spanning states, countries, or the whole world.

a. MAN	b. LAN
c. WAN	d. None of above

- 3) DQDB stands for _____.

a. Dual Queue Dual Bus	b. Double Queue Double Bus
c. Dual Queue Dual Bits	d. Distributed Queue Dual Bus

- 4) In a fiber-optic cable, the signal is propagated along the inner core by

a. Reflection	b. Refraction
c. Modulation	d. Amplification

- 5) _____ Cable is used for voice and data communications.

a. Coaxial	b. Fiber-optic
c. Twisted-pair	d. None of the above

- 6) When a beam of light travels through media of two different densities, if the angle of incidence is greater than the critical angle, _____ occurs.

a. Reflection	b. Refraction
c. Incidence	d. Criticism

- 7) Which of the following CSMA has highest chances of collision?

a. 1-persistent	b. p-persistent
c. non-persistent	d. All has equal chances

- 8) Bit synchronization is responsibility of _____.

a. Data link Layer	b. Network Layer
c. Session Layer	d. Physical Layer

- 9) A router forwards packets on the basis of their _____ address.

a. MAC	b. logical
c. port	d. all of these

- 10) An artificial satellite needs to have _____ which is the path in which it travels around the Earth.

a. Channel	b. Tower
c. Communication lines	d. Orbit

- Q-2 Give Answers for the following:(Any ten) [20]
- 1 Define computer networks.
 - 2 Difference between broadcasting and multi casting.
 - 3 Define: server and Data rate.
 - 4 What is modulation? List various modulation techniques.
 - 5 Differentiate: TDM and FDM.
 - 6 What is multiplexing? List the categories of multiplexing.
 - 7 What are the advantages of bus topology over mesh topology?
 - 8 What is topology? List different types of LAN topologies.
 - 9 Define: Protocol Stack and Network architecture.
 - 10 What is difference between Repeater and Amplifier?
 - 11 What is satellite? List categories of satellite.
 - 12 Write a short note on Amplifier.
- Q - 3 A) Define computer network. State the advantages and disadvantages of computer network. [5]
 B) Write short note on MAN. [5]
- OR
- Q - 3 A) Discuss the importance of computer networking. [5]
 B) Explain Wide Area Network. [5]
- Q - 4 A) Explain coaxial cable in detail. [5]
 B) Explain circuit switching in detail. [5]
- OR
- Q - 4 A) Discuss in detail fibre optics transmission media and its advantages [5]
 B) Explain Synchronous transmission in detail. [5]
- Q - 5 Explain following topology with their advantages & disadvantages. [10]
 1) Star 2) Bus
- OR
- Q - 5 List all layers of OSI model. Explain any two layers. [10]
- Q - 6 A) Write a detail note on Hub. [5]
 B) Write a note on communication satellite. [5]
- OR
- Q - 6 A) Explain working of Router. [5]
 B) Write a note on geosynchronous satellite. [5]