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Sardar Patel University  
External Examination  
B. Sc. Computer Science-Fifth Semester  
US05CCSC04 : COMPUTER NETWORKS  
Wednesday, 20<sup>th</sup> November - 2013

Time : 10:30 am to 01:30 pm

Total Marks : 70

**Q.1 Select the correct answer for the following.**

**[10]**

1. Using networking one can \_\_\_\_\_.  
[A] share the resources [B] share database  
[C] both A and B [D] none of A & B
2. A \_\_\_\_\_ is a data communication system within a building, plant, or campus, or between nearby buildings.  
[A] MAN [B] LAN [C] WAN [D] None of above
3. If a computer on the network shares resources for others to use, it is called \_\_\_\_\_.  
[A] server [B] client [C] mainframe [D] router
4. Which of the following modulation requires the lowest bandwidth?  
[A] ASK [B] PSK [C] FSK [D] QPSK
5. In a fiber-optic cable, the signal is propagated along the inner core by  
[A] Reflection [B] Refraction [C] Modulation [D] Amplification
6. Which of the following physical connection is the fastest?  
[A] Twisted pair [B] Fiber-optic cable  
[C] Coaxial cable [D] Radio waves
7. Which layer is not present in OSI Model?  
[A] Internet Layer [B] Transport Layer  
[C] Physical Layer [D] Application Layer
8. The \_\_\_\_\_ layer lies between the network layer and the application layer.  
[A] Data link [B] Physical [C] Transport [D] None of the above
9. A Bridge can \_\_\_\_\_.  
[A] Filter a frame [B] Forward a frame  
[C] Extend a LAN [D] Do all the above
10. A \_\_\_\_\_ is actually a multiport repeater.  
[A] hub [B] bridge [C] router [D] VLAN

**Q.2 Answer in short. (Attempt any TEN)**

**[20]**

1. How can we classify computer networks?
2. What is MAN?
3. Define bandwidth and server.

4. List the modulation techniques.
5. Differentiate between single-mode fiber and multi-mode fiber.
6. Explain phase modulation with example in brief.
7. Write the full form of (i) DNS (ii) FTP.
8. Explain routing in brief.
9. Define bent pipe.
10. Explain modem with example in brief.
11. Explain Persistent CSMA in brief.
12. Explain different type of switches in brief.

**Q.3** [a] Define computer network. How can we classify it? Discuss need and disadvantages of it. **[05]**

[b] What is LAN? List the characteristics of LAN. **[05]**

**OR**

**Q.3** [a] Discuss the importance of computer networking. **[05]**

[b] Write notes on Wide Area Network. **[05]**

**Q.4** [a] What is switching? Explain packet switching in detail. **[05]**

[b] Discuss in detail fiber optics transmission media and its advantages. **[05]**

**OR**

**Q.4** [a] Discuss time division switching along with its types in detail. **[05]**

[b] Differentiate between guided and unguided media. **[05]**

**Q.5** [a] Write detail note on OSI reference model. **[05]**

[b] Write notes on wireless networks. **[05]**

**OR**

**Q.5** [a] Write notes on communication satellite. **[05]**

[b] List and explain design issues for layers. **[05]**

**Q.6** Explain the function of following. **[10]**

[i] Amplifiers [ii] Routers [iii] Gateway [iv] Hub [v] Bridges

**OR**

**Q.6** What is topology? List different types of topology. Explain any two topologies with advantages and disadvantages. **[10]**

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