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BTC/BTI/UCS-504

Roll No. A220524252 ..

B. TECH (CSE, IT), B. TECH (CSE) + MBA
DUAL DEGREE & B. TECH (CSE) - EVENING

FIFTH SEMESTER END TERM EXAMINATION :
NOVEMBER, 2013

**DATA COMMUNICATION &
COMPUTER NETWORKS**

Time : 3 Hrs.

Maximum Marks : 70

Note: Attempt questions from all sections as directed.

SECTION - A (30 Marks)

Attempt any 5 questions.

Each question carries 6 marks.

1. Define Circuit Switching & Packet switching.
Differentiate between them.

2. What are the various function performed by
 - (a) Data Link layer
 - (b) Transport Layer
 - (c) Network Layer

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3. Define following terms : (Any Six)

- (a) Email
- (b) DNS
- (c) Communication Satellites
- (d) PPP Protocol
- (e) Switch
- (f) Bridges
- (g) ATM

4. Write a Brief Note on CSMA/CD & PSTN.

5. Explain Go Back N ARQ with Sliding window Protocol & also discuss its Window size, Efficiency & its Pros Cons.

6. Differentiate between TCP & UDP with its structure.

SECTION - B (20 Marks)

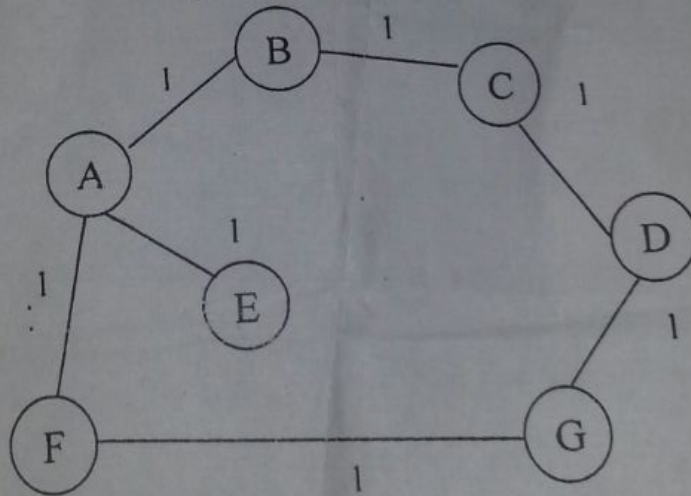
*Attempt any two questions.
Each question carries 10 marks.*

7. (a) How do the layers of the internet Model correlate to the layers of the OSI Model? Differentiate between OSI & TCP/IP model. (6)

(b) What is addressing? Discuss Physical Address, Logical Address & Port Address with example. (4)

8. (a) What is Router & Routing Protocol? Explain Link State Routing with an example. (5)

(b) Solve this Graph & find out the shortest path by Distance Vector Routing method. (5)



9. (a) What is IP Addresses? Categorize the IP Addresses into various classes. (5)

(b) What is IPv4 Protocol? Show the IPv4 Datagram format with the help of suitable diagram & briefly explain various fields there in. (5)

SECTION - C

(20 Marks)

(Compulsory)

10. (a) Given the Dataword 110101010 & the divisor $x^2 + x + 1$,

(i) Show the generation of the codeword at the sender site.

(ii) Show the checking of the codeword at the receiver site. (5)

(b) What is Transmission Medium? Differentiate between Guided & Unguided media. (3)

(c) In India there are no. of Amity Institutions Students of ASET want to build up a computer network for all institutions for smooth working. Suggest

(i) Network plan.

(ii) Topology & justify your selection.

(iii) Transmission media used, justify your selection.

(iv) Hardware device used with justification.

(v) Which protocol where used and why? (12)