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BE SEMESTER-V (New) Examination April-2024

Subject Code: CE505-N

Subject Name: COMPUTER NETWORKS

Date: 16/04/2024

Time: 12:00 pm. to 03:00 pm.

Total Marks: 70

Instructions:

1. Answer each section in separate answer sheet.
2. Use of scientific calculator is permitted.
3. All questions are Compulsory.
4. Indicate clearly, the option you attempt along with its respective question number.
5. Use the last page of main supplementary of rough work.

Section-I

Q-1 (A) Differentiate Peer to Peer & Client Server Network [5]

(B) Explain functionalities of data link and network layer [5]

(C) Define Topology; explain Mesh topology with its advantages and disadvantages. [5]

OR

(C) Compare Token ring & Token bus network [5]

Q-2 (A) List out wireless transmission media, explain any five [5]

(B) Briefly discuss about TCP/IP model with protocol [5]

OR

(A) Find the below mention from given IP Address 152.32.151.135 / 24 with necessary calculation [5]

I. Network ID? _____

II. Broadcast ID? _____

III. Last valid host IP? _____

IV. Nr. of Subnets? _____

V. Nr. of hosts per subnet? _____

(B) What is data communication? Explain its components [5]

Q-3 (A) Short note on IPv6 [5]

(B) What is multiplexing? Describe TDM [5]

OR

(A) Explain TCP header fields [5]

(B) Advantage of optical fiber over twisted pair and coaxial cable [5]

Section-II

- Q-4 (A) Explain Pure aloha and Slotted aloha [5]
(B) Define below w.r.t. its functionality and working at layer [5]

- I. Repeater
- II. HUB
- III. Router
- IV. Bridge
- V. Switch

- (C) List our error detection technique and explain any one with example [5]

OR

- (C) Given the data word 101001111 and the divisor 10111, [5]
Show the generation of the CRC code word at the sender side only

- Q-5 (A) What is CSMA?, also discuss different persistent methods of CSMA [5]
(B) Explain Distance Vector routing with example [5]

OR

- (A) Explain Adaptive tree protocol with any example [5]
(B) Explain transport service primitives during client server call in connection oriented service [5]

- Q-6 (A) How congestion can be controlled by network layer? explain any one approach in details [5]
(B) What is flooding? how can eliminated duplicate packets [5]

OR

- (A) Briefly discuss about application layer protocols (any five) [5]
(B) What is DHCP? List types of IP allocation methods, Discuss any one [5]

---Good Luck---