KUMARAGURU
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Register Number:……

MCA DEGREE EXAMINATIONS: NOV/DEC 2014

(Regulation 2009)

Fifth Semester

MASTER OF COMPUTER APPLICATIONS

MCA526 : TCP / IP Protocol Suite

Time: Three Hours **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 2 = 10 Marks)

1. What are the key elements of a protocol?
2. A host with IP address 9.11.67.3 sends a message to a host with IP address 11.34.2.7. Does the message travel through any router? Justify.
3. Distinguish between static and dynamic routing.
4. A subnet mask in class A has 14 1s. How many subnets does it define?
5. Write the uses of Urgent Pointer in TCP Leader.
6. What is Congestion?
7. In which situation Dynamic IP address (DHCP) can be used in the network?
8. Name two types of resource records and their use in the domain name resolution process.
9. What are the various well known port numbers used by the FTP?
10. Which protocol is used to manage and monitor the Network?

PART B (5 x 16 = 80 Marks)

11. a) (i) Explain in detail the functions of various layers of TCP/IP protocol suite with examples and a neat labeled block diagram. (8)

    (ii) What are the different levels of addressing used in the TCP/IP protocol suite? Explain with suitable examples. (8)

(OR)

b) (i) Compare the various LAN technologies in practice today. (8)

(ii) Explain how the various interconnecting devices help in building of LAN and WAN. (8)

12. a) (i) An organization is granted an address space 211.17.160.0 in class C. The administrator wants to create 24 subnets. (8)
Find the custom subnet mask?
Find the number of usable subnets?
Find the number of usable address in each subnet?
Find the first and last usable address of the third usable subnet?

(ii) Explain how the routing module is implemented in the TCP/IP protocol suite. (8)

(OR)

b) (i) Explain in detail about the implementation of the ARP package in the TCP/IP protocol suite. (8)

(ii) Discuss in details about IC mp protocol with examples of error reporting messages. (8)

13. a) Explain in detail about UDP (User Datagram Protocol) with neat header format.

(OR)

b) (i) Explain the various client states in the TCP client server communication with the help of a neat labeled state transition diagram. (8)

(ii) How is congestion control implemented in the TCP/IP protocol suite? (8)

14. a) (i) Explain the functionality of DHCP with the help of a transition diagram. (8)

(ii) How fully qualified domain names are converted in to their corresponding IP address? Explain with an example. (8)

(OR)

b) (i) How remote computer are accessed with the Network Virtual Terminal concept? Explain. (8)

(ii) Explain in detail the working of RLOGIN application with a suitable example. (8)

15. a) (i) Explain about the standard mechanism used to copy files from one host to another in the TCP/IP protocol suite. (8)

(ii) How are emails sent and received by the email servers. Explain with block diagrams and examples (8)

(OR)

b) (i) Explain about the application used to manage network resources available in the internet using TCP/IP protocol suite. (8)

(ii) How is the HTTP used to access data on the world wide web? Explain the process with block diagrams and example. (8)

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