Total No. of Questions :5]   [Total No. of Printed Pages :3

Roll No ....

CS - 8201

B.E. VIII Semester

Examination, December 2016

Network Management

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.

ii) All parts of each question are to be attempted at one place.

iii) All questions carry equal marks. out of which part A and B (Max. 50 words) carry 2 marks, part C (Max. 100 words) carry 3 marks. part D (Max. 400 words) carry 7 marks.

iv) Except numericals, Derivation, Design and Drawing etc.

Unit - I

1. a) Define Fault Management.
   b) State four function of Network management.
   c) What is the difference between manual, facilitated and automated management?
   d) Explain briefly Network management architecture.

   OR

   List out Sub-categories of configuration management with brief description.

Unit - II

2. a) What is the function of the RMON group matrix?
   b) Define Desktop Management interface.
   c) Explain the need for MIB.
   d) What is OID in MIB? Explain briefly.

   OR

   What is DMI architecture? Explain in brief.

Unit - III

3. a) What is an ARP cache?

b) What is gratuitous ARP?

c) What will be subnet address if the destination address is [200·45·34·56] and subnet mask is [255·255·240·0].

d) What is IPv6? Explain its advantages over IPv4? Also explain its frame format.

OR

Draw the IP datagram header format "IP datagram has a checksum field still it is called an unreliable protocol". Justify.

Unit - IV

4. a) What happens to packets if there is a routing loop with routers?

b) What will be the administrative distance of OSPF routes?

c) Which TCP port does BGP used to establish connection between routers? What will be the netmask for the 176.9.59/16?

d) What are well known ports? Explain its importance. Identify the port numbers for the following applications.

   i) Telnet

   ii) HTTP

   iii) DHCP

OR

Why a NAT router is preferred over a proxy for sharing internet connection? Justify your answer. You are presented with an IP address with a prefix of /22. How many more subnets can you add to your design if you further subnet with VLSM mask of / 27?

Unit - V

5. a) What is TCP keep alive timer?

b) Can SMTP be used as transfer protocol for web pages? Why?

c) Why does FTP use two standard ports whereas other protocols in general use only one port? Justify.

d) What is Wagle Algorithm? Explain with diagram and example.

OR

Consider sending a large file from host to another over a TCP connection that has no loss.

i) Suppose TCP uses AIMD for its congestion control without slow start. Assuming cwnd increases by 1MSS every time a batch of ACKs is received and assuming approximately constant round trip time. How long does it take for cwnd in crease from 6MSS to 12MSS.

ii) How long does it take for cound increase from 6MSS to 12MSS if cwnd increases by 2MSS.

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