

Hall Ticket Number:

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Code No.: 126 S

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
M.C.A. I Year II-Semester (Supplementary) Examinations, December-2015

Computer Networks

Time: 3 hours

Max. Marks: 70

Note: Answer ALL questions in Part-A and any FIVE questions from Part-B

Part-A (10 X 2=20 Marks)

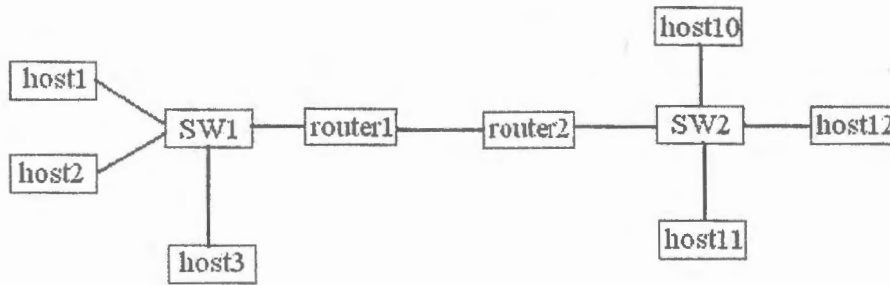
1. Draw the cross section of a coaxial cable and explain its characteristics.
2. Give two important advantages of layered organization of network software.
3. Explain channelization with a simple example.
4. Briefly explain reservation access method in controlled access channels using a suitable diagram.
5. Define Supernetting.
6. Illustrate the operation of the traceroute program.
7. Draw the format of UDP segment and identify the internal fields.
8. Justify the need of simpler protocols on high speed networks.
9. Draw the structure of domain name space and list the various steps involved in resolving a domain name.
10. List the differences between a plug-in and a helper application in the context of a web browser.

Part-B (5 X 10=50 Marks)
(All bits carry equal marks)

11. a) Draw the block diagram of a data communication system and explain its working.
b) Compare and match ISO/OSI and TCP/IP protocol stacks.
12. a) A bit stream 1100110 is transmitted using the standard CRC method using the generator polynomial $x^3 + 1$. What is the actual string transmitted?
b) Discuss the Stop and Wait ARQ along with its merits and limitations.

Contd...2

13. a) A packet is to be delivered from host1 of LAN1 to host10 of LAN2 in the network shown below:



(SW = Switch)

Identify and briefly explain the protocols used in moving the packet from sender to receiver through the intermediate network devices.

b) Compare Border Gateway Protocol (BGP) and distance vector routing.

14. a) Differentiate connection oriented to connection less services in transport Layer.

b) Explain TCP congestion control.

15. a) Explain, using a block diagram, the interaction of the mail servers and clients at the sender's end and at the receiver's end. Identify various protocols used.

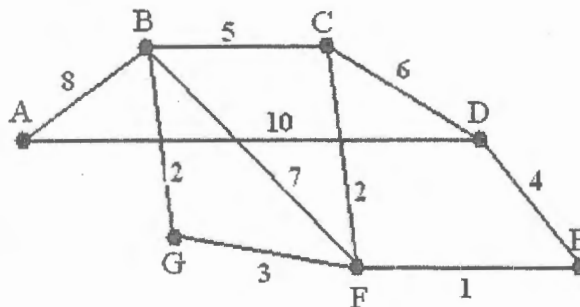
b) Explain FTP protocol.

16. a) Describe various network topologies and list their merits and demerits.

b) Explain various Random Access Protocols.

17. Answer any two of the following:

a) Consider the subnet consisting of 7 routers as shown below:



Each arc is labeled with delay. Write down the link state packets for this subnet and compute the shortest path from G to D.

b) List the timers used in transport layer and briefly explain.

c) Give the formats of the request and response messages of HTTP protocol and explain.
