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B. E. (Sixth Semester) Examination,
April-May 2015

(New Scheme)

(Computer Science Engg.)

INTER NETWORKING with TCP/IP

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

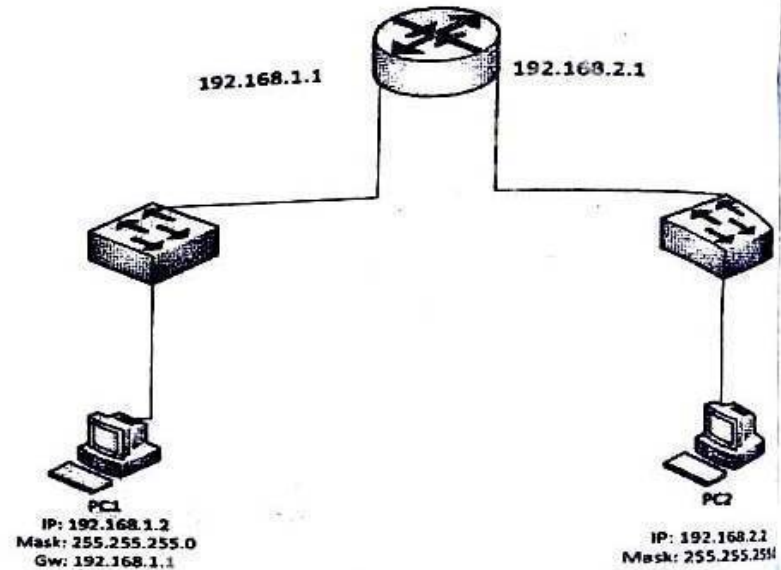
Note : Attempt all questions. Part (a) from each question is compulsory. Attempt any two parts from parts (b), (c) and (d) of each question.

- 1. (a) Explain the three types of addresses in TCP/IP. 2
- (b) Explain the two techniques for implementing Ethernet switches. 7

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(c) In the given Scenario, PC1 is unable to ping PC2. What could be the possible reason, specify the changes to be done in order to establish connectivity between PC1 and PC2.



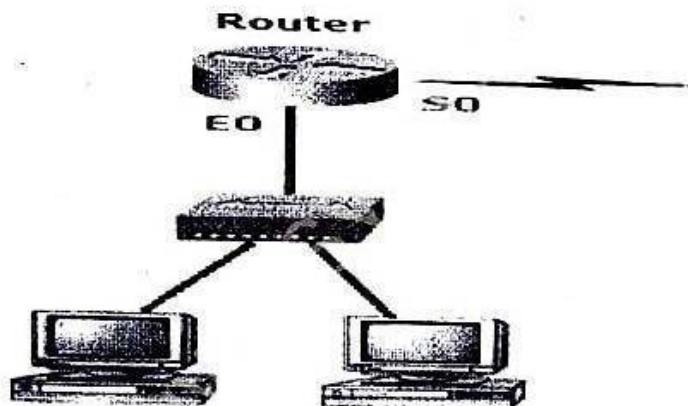
(d) Being Network administrators you have got the responsibility to setup a SOHO (Small Office Home) Ethernet- you are having three option to select Ethernet (a) Traditional Ethernet (b) Fast Ethernet (c) Gigabit Ethernet so which one you select and why give justification along with devices media and connector used in respective Ethernet.

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2. (a) What is Loopback address?

(b) As per illustration in given scenario, what would be the IP address of E0 if you were using the eighth subnet? The network ID is 192.168.10.0/28 and you need to use the last available IP address in the range. The zero subnet should not be considered valid for this question.



Select the appropriate IP address option from the following and give the explanation for the selection : 7

- (A) 192.168.10.142
- (B) 192.168.10.66
- (C) 192.168.100.254

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(D) 192.168.10.143

(E) 192.168.10.126

(c) Discuss the security and applications of IPsec.

(d) Compare IPv4 and IPv6 by drawing packet format.

3. (a) What do you mean by NAT?

(b) Draw the same format of following BGP messages and explain the different fields :

- (i) Open Message
- (ii) Update Message
- (iii) Keep Alive Message
- (iv) Notification Message

(c) What do you mean by Interior and Exterior routing? Discuss Interior and Exterior routing protocols with their working.

(d) Suppose we have forwarding tables shown below for Node A and F, in a network where all links have cost 1. Give a diagram of the smallest network consistent with these tables with justification.

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NODE A			NODE B		
Node	Cost	Nexthop	Node	Cost	Nexthop
B	1	B	A	2	C
C	1	C	B	3	C
D	2	B	C	1	C
E	3	C	D	2	C
F	2	C	E	1	E

4. (a) What is silly window syndrome why its caused? 2
- (b) Explain the Karn's Algorithm. 7
- (c) What is the difference between UDP and TCP internet protocols? 7
- (d) Explain the working of leaky bucket algorithm by drawing flowchart of algorithm. 7
5. (a) Specify the type service provided AAL1. 2
- (b) What is ATM? Explain the architecture of ATM Network. 7
- (c) Explain layer -2 protocol (LAPD) of ISDN by drawing fram format & specifying the responsibility. 7

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- (d) Discuss the benefits of ATM over its counterparts.

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