

**2015**

Time : 3 hours

Full Marks: 70

Candidates are required to give their answers in their own words as far as practicable.

The figures in the margin indicate full marks.

Answer from **all** the Groups are directed.

**Group – A**

**(Objective-type Questions)**

1. Answer the following multiple choice questions: 1x15=15

a) Direct mapping occur when hardware addresses are ..... Than IP address.

- i. Larger
- ii. Smaller
- iii. Equal to
- iv. Greater than & equal to

b) SNMP message have ..... fields.

- i. Fixed
- ii. Variable
- iii. No such constraint
- iv. No fields

- c) In case of an error, ..... can only report the error condition back to the original source of a datagram.
- i. IGMP
  - ii. ICMP
  - iii. UDP
  - iv. ECE
- d) FTP is .....than TFTP.
- i. Smaller
  - ii. Equal to
  - iii. Larger
  - iv. Smaller than & equal to
- e) Message, image, Video and Audio are the content types of:
- i. MIME
  - ii. SMTP
  - iii. FTP
  - iv. SNMP
- f) At the time of forwarding a packet, routers use destination.....
- i. Network
  - ii. Packet
  - iii. Computer
  - iv. Message
- g) In SMTP.....can be transmitted.
- i. Text files
  - ii. Executable files
  - iii. Images
  - iv. Text and Images
- h) Lowest address in a multicast is .....

- i. 210.180.150.0
  - ii. 0.0.0.0
  - iii. 0.0.0.1
  - iv. 224.0.0.0
- i) System calls pass control to the .....
- i. Hard disk
  - ii. Operating system
  - iii. Server
  - iv. Processor
- j) Multicast forwarding requires a router to examine ..... destination address.
  - i. Equal
  - ii. Less
  - iii. More
  - iv. All of these
- k) ICMP provides communication between the internet protocol ..... of machines.
  - i. Routers
  - ii. Softwares
  - iii. Servers
  - iv. Switches
- l) Dotted decimal notation consists of .....bit binary integers.
  - i. 8
  - ii. 16
  - iii. 32
  - iv. 64
- m) IP gateway is analogous to IP.....

- i. IP address
  - ii. Datagram
  - iii. Router
  - iv. Switching
- n) Online shared files is a feature in .....
- i. FTP
  - ii. TFTP
  - iii. NFS
  - iv. TTF
- o) RARP uses the system to obtain ..... address at startup.
- i. MAC
  - ii. IP
  - iii. Physical
  - iv. Ethernet

### Group – B

Answer any **five** questions of the following:      4x5=20

2. Explain the terms gateway, routers and protocol.
3. What is a datagram? Describe the format of an IP datagram.
4. How is multicasting an efficient mechanism in communication through internet?
5. Describe in brief the features of ATM.
6. How is a socket created? Describe the process.
7. Distinguish between FTP and TFTP.
8. What are the security mechanisms adopted to avoid virus threat in internet.

## Group – C

Answer any **five** questions of the following:

7x5=35

9. How is the mapping of Internet address done on the physical address? How is a crash avoided?
10. Name any three multicast routing protocol and describe them.
11. Describe the error reporting mechanism. How are the messages in ICMP delivered?
12. Why is UNIX efficient in socket interface? How can one obtain information about hosts through the socket?
13. How does the multicast routers and hosts join a multicast group? Give the format of the report message of a group member.
14. Differentiate between the SMTP and MIME. Which possess more features and is more advantageous.
15. Write short notes on the following:
  - a) Domain Name System (DNS)
  - b) User Datagram Protocol (UDP)

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