

INTERNET & WEB TECHNOLOGY

5th Semester, MCA

Time: 3.00 Hours

Full Marks: 70

Answer Q. No. 1 which is compulsory and any five from the rest

The figures in the parenthesis in the right hand margin indicate marks

1. Answer all the following questions:

(2x10)

- (a) Why IP is called 'best effort delivery' protocol? (5)
 - (b) Find the class of the IP addresses
 - (i) 172.16.17.67 (5)
 - (ii) 241.27.54.1 (5)
 - (c) Why lease line is more different than other network? Justify your answer. (5)
 - (d) Define URL and state its components. (5)
 - (e) What do you mean by bidirectional authentication? (5)
 - (f) A file is downloaded in a computer using a 56 kbps MODEM connected to an ISP. If downloaded of file completes in 4 minutes, find the maximum size of data downloaded. (5)
 - (g) What is Inverse domain? (5)
 - (h) Using RSA public key crypto system, if $P=13$, $q=31$ & $d=7$, then find the value of 'e' (5)
 - (i) Differentiate between intranet and extranet. (5)
 - (j) Assuming classful addressing find the nos. of subnets and the nos. of hosts per subnets for the following block:
122.45.77.32/20 (5)
2. (a) Explain the structure of Internet Architecture Board. (5)
- (b) Write the difference between Circuit Switching & packet Switching. Why Internets is called packet Switched network? (5)
3. (a) Explain about Local Area Network Architecture. (5)
- (b) State the various components of Internet. What do you mean by Internet backbone? (5)
4. (a) Define network protocol and explain about protocol Architecture. (5)
- (b) Discuss about key network capabilities. (5)

4. (a) What is IP addressing? Explain the different types of class network available with their field format. (5)
- (b) Explain the operation of the routing protocol OSPF? (5)
6. (a) What is the importance of DNS? Explain different types of DNS messages. (5)
- (b) Discuss the importance of e-mail. Write its operations. (5)
7. (a) Explain about AES Algorithm with example. (5)
- (b) Discuss about message authentication. (5)
8. Write notes on (any four) (10)

(i) E-commerce

(ii) Frame Relay

(iii) Firewall

(iv) Router

(v) Voice Grade Modem

(vi) UDP

240
95

1440
1200

240

100
20

80

0.127

128-191
192-223
224-239
240-255

101