

Total No. of Questions : 8]

SEAT No. :

P4891

[Total No. of Pages : 2

[5155]-17

M.E. (Computer Engineering)
INTERNET ROUTING DESIGN
(2008 Course) (Semester - I) (Elective - I (c))

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:-

- 1) *Answer any three questions from each section.*
- 2) *Answers to the two sections should be written in separate books.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Use of logarithmic tables slide rule, Mollier charts, electronic pocket calculator and steam tables is allowed.*
- 5) *Assume suitable data if necessary.*

SECTION - I

- Q1)** a) Explain in detail classful addressing and CIDR. **[8]**
b) Write and explain the algorithm for shortest path computation when candidate paths are known. **[8]**
- Q2)** a) Explain Dijkstra's shortest path first algorithm for centralized approach. **[8]**
b) Explain basic framework for distance vector routing protocol. **[8]**
- Q3)** a) Write and explain path vector protocol with path caching. **[8]**
b) What are the sub-protocols of a link state Protocol? Compare distance vector protocol and link state protocol. **[8]**
- Q4)** a) Explain in detail similarities and differences between IS-IS and OSPF. **[9]**
b) Explain packet format of RIPV1. Compare RIPV1 and RIPV2. **[9]**

P.T.O.

SECTION - II

- Q5)** a) Explain basic forwarding functions and complex forwarding functions of a router. [8]
b) Explain Route reflection approach in BGP. [8]
- Q6)** a) Explain with example Ternary CAM based lookup. State advantages and disadvantages of TCAM. [8]
b) Explain why longest prefix match is important and define longest prefix matching problem. Explain why prefix expansion is required. [8]
- Q7)** a) Explain with an example the algorithm for binary search on prefix lengths. [8]
b) Explain with an example Lucent bit vector approach for packet classification. [8]
- Q8)** Write short note on :
- a) Source – Based QOS routing with path caching. [6]
b) Routing for voice over MPLS. [6]
c) QOS attributes. [6]

