

Code: 9A05806

**R09**

B.Tech IV Year II Semester (R09) Regular &amp; Supplementary Examinations April 2016

**INTERNETWORKING WITH TCP/IP**

(Computer Science and Engineering)

Time: 3 hours

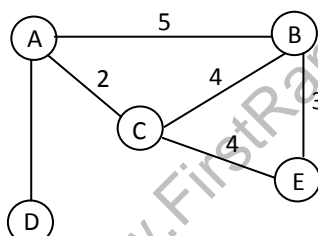
Max. Marks: 70

Answer any FIVE questions

All questions carry equal marks

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- 1 (a) Explain the IP datagram with a neat sketch and fields.  
(b) In a datagram the M bit is zero, the value of HLEN is 5, the value of total length is 200 offset value is 200. What is the number of first byte and number of last byte in this datagram? Is this the last fragment, the first fragment or a middle fragment?
- 2 (a) Explain the working principle of NAT.  
(b) A router has an IP address of 140.15.8.20. It sends a broad cast packet to all hosts in this network. What are the source and destination IP addresses used in this packet?
- 3 (a) Discuss the different fields that are used in ARP package format.  
(b) Explain Error reporting and query messages.
- 4 (a) Define autonomous system. Using distance vector routing algorithm, find the least cost to reach node E from A for the following figure below.



- (b) Explain different types of Autonomous system in inter domain routing protocol.
- 5 (a) Explain the TCP segment with a neat diagram.  
(b) Discuss the different component of UDP packages.
- 6 (a) How TCP provides reliability using Error Control? Explain it.  
(b) In TCP, if the previous RTT is 250 microseconds and it takes a segment at this moment to be acknowledged in 750  $\mu s$ , find out the value of the new RTT.
- 7 (a) Explain the different modes of operation in Telnet implementation.  
(b) Discuss the communication mechanism in FTP.
- 8 (a) Discuss the IPV6 extensions headers.  
(b) Compare the error reporting messages in ICMPV6.

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