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MANIPAL INSTITUTE OF TECHNOLOGY
(Constituent Institute of Manipal University)
MANIPAL-576104

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I SEMESTER M.TECH(CSE & CSIS) DEGREE
END-SEMESTER EXAMINATION-NOVEMBER/DECEMBER 2015
SUBJECT: ADVANCED COMPUTER NETWORKS (CSE 503)
DATE: 05-12-2015

TIME: 3 HOURS MAX.MARKS: 50

Instructions to Candidates
Note: ANSWER ANY FIVE FULL QUESTIONS. Missing data, if any may be suitably assumed.

1A. In a IPV4 datagram, the M bit is zero, the value of HLEN is 5, the value of total length is 200, and the offset value is 200. What is the number of the first byte and number of the last byte in this datagram? Is this the last fragment, the first fragment, or a middle fragment? Are there any options?
1B. Draw a neat diagram and explain the IP package. (4+6)

2A. Explain the functionality of input and output modules in ARP.
2B. Briefly explain the various error reporting messages in ICMPV4. (4+6)

3A. What are UDP services? Explain.
3B. Draw and explain the TCP time line diagram for connection establishment and half close termination. (4+6)

4A. Explain congestion control in TCP.
4B. Distinguish between POP and IMAP.
4C. What is the significance of IPV6 flow label? (4+3+3)

5A. What is the impact of non-linear effects on WDM communication systems? How can it be controlled?

5B. What is a linear light wave network? How is it different from a wavelength routed network? (5+5)

6. Write short notes on the following:
   i) Gigabit Ethernet.
   ii) RIP version 1 protocol
   iii) Optical Burst Switching
   iv) Voice Over IP (3+3+2+2)

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