

Code No: 43- NR

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

MCA IV Semester Supplementary Examinations, January 2010

COMPUTER COMMUNICATION

Time : 3 hours

Max.Marks:60

Answer any FIVE questions

All questions carry equal marks

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- 1.a) What are the principles that were applied to arrive at different layers in OSI reference model? Explain.
- b) Explain in detail the role played by different layers in OSI reference model.
- 2.a) Discuss the n-bit sliding window protocol with selective repeat.
- b) What is the remainder obtained by dividing $x^{11} + x^7 + x^5 + x^3 + 1$ by the generator polynomial $x^3 + x + 1$.
- 3.a) Compare and contrast various carrier sense multiple access protocols.
- b) Describe the features of HDLC protocol.
- 4.a) Briefly explain the following routing algorithm
 - i) Flooding
 - ii) Distance vector routing
- b) Discuss the general principles of congestion control.
- 5.a) Discuss some of the ways in which the networks differ? How is internetworking done.
- b) What are the service categories and quality of service parameters of ATM networks?
- c) Describe the features of IPV 4.
- 6.a) Describe how flow control, buffering and crash recovery are handled by transport layer.
- b) Compare TCP and UDP protocols.
- 7.a) Explain symmetric key-algorithm of networks security.
- b) Distinguish between filter based fire walls and proxy based firewalls.
8. Write a brief note on:
 - i) DNS
 - ii) SMTP
