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Question Paper Code :

**ANIL NEERUKONDA INSTITUTE OF TECHNOLOGY & SCIENCES
(AUTONOMOUS)**

M.E/M.Tech I-Semester Regular Examinations, November 2015

Computer Networks

(Computer Science & Technology)

Date:

Time: 3 hours

Max Marks: 60

Answer ONE Question from each Unit

All Questions Carry Equal Marks

All parts of the question must be answered in one place only

Unit-1

1. A) Write different types of transmission media, highlight their merits and demerits. (6M)
B) Explain the various factors contributing to the network performance (6M)
(OR)
2. A) Explain how the gateway is different from router. (4M)
B) Discuss about the architecture of computer network with sketch. (8M)

Unit-2

3. Go back N and selective repeat are two approaches to deal with the transmission errors ,With the aid of packet sequence diagram, show the operation of go-back-n when a data-packet/ACK-Packet/NAK-packet is corrupted. (12M)
(OR)
4. Explain the framing and error detection mechanism in networks. (12M)

Unit-3

5. A) Illustrate with a neat sketch, the IPV 4 datagram format. Compare the fields in the main headers of IPV 4 and IPV 6. (6M)
B) State the major difference between Distance Vector Routing and Link state Routing. Discuss how these routing techniques work. (6M)
(OR)
6. Explain how congestion is avoided in TCP/IP transmission. (12M)

Unit-4

- 7..A) Briefly explain the techniques to improve QOS. (5M)
B) Suppose TCP operates over a 1-gbps link, utilizing the full bandwidth continuously .How long will it take for the sequence number to wrap around completely ?Suppose an added 32bit timestamp field increments 1000times during this wrap around time, how long will it take for the timestamp field to wrap around? (7M)

(OR)

8. Explain in detail the connection establishment and termination in transmission control protocol (12M)

Unit-5

- 9.A) Compare the different switching techniques available and the efficiency of each in detail. (8M)
B) What is the purpose of sub netting? (4M)
- (OR)
10. A) Explain the concept of Virtual private network? (4M)
B) What is Cryptography and explain the role of private key in secured data transmission. (8M)