

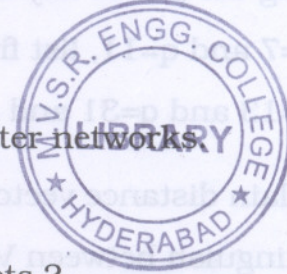
## FACULTY OF INFORMATICS

## B.E. III/IV Year (IT) II Semester (Main) Examination, May/June 2011

## COMPUTER NETWORKS

Time : 3 Hours]

[Max. Marks : 75

Answer **all** questions from Part A.Answer any **five** questions from Part B.**Part A** – (Marks: 25)

1. List out the various network hardware used in computer networks. 2
2. What are the metrics for quality of service ? 2
3. Why is fragmentation needed when transferring packets ? 3
4. What is a daemon process ? 2
5. Define Resource Record. 2
6. What is VOID ? List its uses. 3
7. What are the operations of SNMP protocol ? 3
8. What do you mean by digital signature ? 3
9. ELABORATE "count-to-infinity" problem ? 3
10. What are the services of transport layer ? 2

**Part B** – (Marks : 50)

11. (a) What are the functions of the network layer ? List out the design issues in it ? 6
- (b) Compare ISO-OSI and TCP/IP reference model . 4
12. (a) Explain IP addressing mechanism and classify them. 4
- (b) Define Internet control protocols and explain anyone. 6
13. (a) Discuss about interoperability of IPV4 and IPV6. 5
- (b) Define socket. Explain Elementary Sockets. 5

14. (a) Explain E-mail Architecture and services. 6  
(b) Differentiate static and dynamic web documents. 4
15. (a) List out all the techniques for encryption. Write a public key cryptographic algorithm. 6  
(b) Using the public key crypto system with  $a=1, b=2$ .  
(1) if  $p=7$  and  $q=11$ , list five legal values for 'd'  
(2) if  $p=13$  and  $q=31$  and  $d=7$ , find e. 4
16. (a) Explain distance vector routing algorithm and mention its drawbacks. 6  
(b) Distinguish between Virtual circuits and datagram subnets. 4
17. Write short notes on :  
(a) Advanced sockets 3  
(b) POP3 3  
(c) E-mail security. 4