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Question Paper Code: 12005

M.E. DEGREE EXAMINATION, DECEMBER 2013.

First Semester

Computer Science and Engineering (with Specialization in Networks)

01PNE103 – HIGH PERFORMANCE COMPUTER NETWORKS

(Common to Computer Science and Engineering)

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. List the modes of communication.
2. Define OSI and its applications.
3. Write any four multimedia networking applications.
4. List the advantages of guaranteed services.
5. Write about the improvements in P2P connections.
6. Define the role of VPN.
7. What are common parameters of traffic modeling?
8. Define an efficient modeling strategy suits for traffic handling in high performance networks.
9. Describe the role of databases in MIB.
10. Write all the admin privileges used in network management.

PART - B (5 x 14 = 70 Marks)

11. (a) Give detailed notes on ATM Networks with its protocol architecture and highlight the need to deploy ATM networks. (14)

Or

- (b) Write short notes on
- (i) DSL (4)
 - (ii) ISDN (6)
 - (iii) SONET (4)
12. (a) Explain the architectural flow and components of Integrated services with an example. (14)
- Or
- (b) Discuss in detail about differentiated services and its applications (14)
13. (a) (i) With an example and neat diagram discuss the principle mechanism in MPLS. (10)
- (ii) Write a short note on Tunneling in FEC. (4)
- Or
- (b) Discuss in detail about security in VPN and with an example discuss how authentication is enabled. (14)
14. (a) Design a traffic model using Little's theorem and compare the features with its peers. (14)
- Or
- (b) Explain all the strategies employed to measure network performance with an example. (14)
15. (a) With a complete architectural representation explain SNMP framework and its applications. (14)
- Or
- (b) (i) Explain the role of ASN.1 in network management and its challenges. (10)
- (ii) Write the limitations of various network management systems. (4)

PART - C (1 x 10 = 10 Marks)

16. (a) Explain in detail about non Poisson models and its applications. (10)
- Or
- (b) Explain in detail about SMI with its limitations. (10)