

Reg. No. :

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Question Paper Code : 11194

M.E. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2014.

First Semester

Computer and Communication

CP 9212/CP 912/AP 957/10244 CC 203 — HIGH PERFORMANCE
COMPUTER NETWORKS

(Common to M.E. Applied Electronics, M.E. Communication Systems,
M.E. Networking and Internet Engineering and
M.E. Communication and Networking)

(Regulation 2009/2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define packet switching.
2. What is function grouping in ISDN?
3. What is meant by best effort service?
4. Write short notes on killer reservation problem.
5. State the security vulnerabilities addressed by VPN.
6. Justify the term 'virtual' in VPN.
7. What is the need for modeling in networks?
8. What is the significance of Poisson distribution in queueing models?
9. List the key requirements for a secured communication system.
10. List the five areas of network management.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Explain the B-ISDN ATM reference model in detail with a neat diagram. (8)
(ii) Explain the SONET technology with necessary diagrams. (8)
Or
- (b) (i) Explain OSI reference model with a neat diagram. (10)
(ii) Differentiate TCP/IP and OSI reference models. (6)
12. (a) (i) Explain the working of Real Time Streaming Protocol with a diagram. (8)
(ii) Explain the leaky bucket traffic shaping algorithm in detail. (8)
Or
- (b) (i) Discuss traffic classification and traffic conditioning. (8)
(ii) Explain the various message types used in RSVP with necessary diagrams. (8)
13. (a) (i) Explain the funnel mode implementation of IPsec VPN. (8)
(ii) Explain the addressing scheme of VPN. (8)
Or
- (b) Explain the principles and operations of MPLS networks. (16)
14. (a) (i) Explain the Markovian FIFO queuing system in detail. (10)
(ii) Explain the limitations of the Poisson model. (6)
Or
- (b) (i) Explain the non Poisson arrival model with an example. (8)
(ii) State and explain Little's theorem. (8)
15. (a) Explain the Kerberos key distribution and certification scheme in detail. (16)
Or
- (b) (i) Explain the working of SNMP in detail. (10)
(ii) Explain the working of RSA algorithm, with a suitable example. (6)