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Question Paper Code : X 60392

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2020

Sixth Semester

Electrical and Electronics Engineering

CS 2363/CS 65/10144 CS 503 – COMPUTER NETWORKS

(Regulations 2008/2010)

[Common to PTCS 2363 – Computer Networks for B.E. (Part-Time) Sixth Semester –
EEE – Regulations 2009]

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions

PART – A

(10×2=20 Marks)

1. Define a computer network.
2. What is a bridge ?
3. What are the uses of internetwork routing ?
4. What is the purpose of subnetting ?
5. What is client process ?
6. What are the two multiplexing strategies used in transport layer ?
7. Define cryptography.
8. What is PGP ?
9. With an example write about the recursive and iterative query process done by DNS resolver in resolving the query.
10. Write about the functions of SMTP and MIME. How does MIME enhances SMTP ?

PART – B

(5×16=80 Marks)

11. a) i) Discuss about the architecture of computer network with sketches. (8)
- ii) Explain the IEEE 802.3 standard. (8)

(OR)

- b) Explain the different approaches of Framing and Encoding in detail. (16)



12. a) Describe in detail the Internet Control Message Protocol (ICMP).

(OR)

b) i) Explain the characteristic features of network routing algorithms. (8)

ii) Write short notes on IP addressing. (8)

13. a) Explain how TCP uses a congestion window and a congestion policy that avoid congestion and detect congestion after it has occurred.

(OR)

b) An output interface in a switch is designed using the leaky bucket algorithm to send 8000 bytes/s (tick). If the following frames are received in sequence, show the frames that are sent during each second.

Frames 1, 2, 3,4 : 4000 bytes each

Frames 5, 6, 7 : 3200 bytes each

Frames 8, 9 : 400 bytes each

Frames 10, 11, 12 : 2000 bytes each.

14. a) Discuss RSA algorithm in detail. (16)

(OR)

b) Explain the following :

i) Authentication based on shared secret key. (8)

ii) Authentication using a key distribution center. (8)

15. a) i) Explain in detail a protocol for electronic mail. (8)

ii) Explain in detail multimedia security. (8)

(OR)

b) Explain in detail the following :

i) Fault management. (8)

ii) Security management. (8)
