18U671 (Pages: 2) Name: ……..…….

Reg. No……..……

SIXTH SEMESTER B.C.A. DEGREE EXAMINATION, APRIL 2020

(CUCBCSS-UG)

(Regular/Supplementary/Improvement)

CC17U BCA6 B13 - COMPUTER NETWORKS

(Computer Application – Core Course)

(2017 Admission onwards)

Time: Three Hours Maximum: 80 Marks

Part A

Answer ***all*** questions. Each question carries 1 mark.

1. What is a protocol?
2. Write examples for connectionless and connection-oriented internet protocols.
3. Which layer has the responsibility of transferring datagram from one node to physically adjacent node over a link?
4. Encryption is done at which layer of OSI model.
5. Gateways are operated at which layer of network model.
6. IPv6 IP addresses are how many bits long.
7. Mention the use of SNMP.
8. What is piggybacking?
9. Define network security.
10. Define digital signatures.

(10 x 1 = 10 Marks)

Part B

Answer ***all*** questions. Each question carries 2 marks.

11. Distinguish between packet switching and message switching.
12. What is a hamming code?
13. Mention the basics of Bluetooth technology.
14. What are the various mobile network standards?
15. What is CSMA/CD?
16. What is NAT? Mention the advantage of using it.
17. What are the different types of encryption?
18. What is a hash function?

(8 x 2 = 16 Marks)

Part C

Answer any ***six*** questions. Each question carries 4 marks.

19. Explain various types of network topologies with its pros and cons.
20. How TCP/IP network model is differing from OSI model?
21. Explain any two transport layer protocols.
22. Define ARQ. Explain Go Back- N-ARQ protocol in detail.
23. Distinguish between IPv4 and IPv6 internet protocols.
24. Explain various security services provided for network security.
25. Distinguish between MAC and Digital Signatures.
26. Explain any two traditional symmetric encryption methods.
27. Briefly explain error detection methods in data link layer.

(6 x 4 = 24 Marks)

Part D

Answer any ***three*** questions. Each question carries 10 marks.

28. With suitable diagram explain various layers of OSI network model.
29. Distinguish between multiple access and random access protocols. Explain any two multiple access protocols.
30. What are the various routing algorithms? Explain Distance Vector Routing algorithm with suitable example.
31. Explain DES in detail including key generation process.
32. What do you mean by public-key cryptography? Explain RSA in detail.

(3 x 10 = 30 Marks)

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