E 7161 (Pages : 2) Reg. No.....

Name.....

B.C.A. DEGREE (C.B.C.S.S.) EXAMINATION, APRIL 2019

Fifth Semester

Core Course—COMPUTER NETWORKS

(2013 to 2016 Admissions)

Time : Three Hours Maximum Marks : 80

Part A (Short Answer Questions)

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

1. Define Internet.
2. Why protocols.
3. List examples for unguided media.
4. In OSI model which layer is responsible for error correction ?
5. What is cyclic code ?
6. Define framing.
7. Write IEEE standard for LAN.
8. Define burst error.
9. The length of IP address in IPV 6 is ————.
10. UDP stands for ————.

(10 × 1 = 10)

Part B (Brief Answer Questions)

Answer any **eight** *questions.*
Each question carries 2 *marks.*

11. What are the key elements of a protocol ?
12. What is the relationship between period and frequency ?
13. What is line configuration ?
14. Differentiate between periodic and non-periodic signals.
15. Define bandwidth.
16. Distinguish between data rate and signal rate.

Turn over

17. What is the relationship between the Van Allen belts and satellites ?
18. What is the Hamming distance ? What is the minimum Hamming distance ?
19. Apply the exclusive-or operation on the following pair of patterns (the symbol Θ means XOR) : (10001) Θ (10000).
20. What is bit stuffing ?
21. What are the two different types of user agents in electronic mail system ?
22. Distinguish between domain name space and domain.

(8 × 2 = 16)

Part C (Descriptive/Short Essay Type Questions)

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

23. Compare and contrast LAN, MAN and WAN networks.
24. Explain the functions of Network layer in OSI model.
25. What are the differences between classful addressing and classless addressing in IPv4 ?
26. Describe the goals of multiplexing.
27. What is the purpose of cladding in an optical fiber ? Name the advantages of optical fiber over twisted-pair and coaxial cable.
28. List four major components of a packet switch and their functions.
29. Define spread spectrum and its goal. List the two spread spectrum techniques.
30. Compare GEO with MEO and LEO.
31. Compare different handoff mechanisms.

(6 × 4 = 24)

Part D (Long Essay)

Answer any **two** *questions.*
Each question carries 15 *marks.*

32. How CSMA mange congestion control in a network.
33. Briefly explain the working of virtual circuit networks.
34. Explain the working of ALOHA.
35. Briefly explain the functionality of each layer of ISO OSI model.

(2 × 15 = 30)