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III Semester B.C.A. Degree Examination, December/January - 2025/26

**COMPUTER SCIENCE****Computer Networks****(SEP Scheme Freshers)****Time : 3 Hours****Maximum Marks : 80****Instructions to Candidates:****Answer All the Parts.**

P G Library  
SRM Adarsh College  
Chamarajpet,  
Bengaluru-560018

**PART - A****I. Answer any Ten of the following questions. Each question carries 2 marks.****(10×2=20)**

1. Define Computer Networks.
2. What is QoS?
3. Explain the command PING.
4. Write a note on WWW.
5. Define protocols. Give two examples.
6. What is HTTP?
7. Expand ICMP, SMTP.
8. What is transmission media?
9. What is an error? What are the different types of errors?
10. Define bit stuffing.
11. What is token passing ring?
12. Calculate the even parity bit for
  - a) 10011001
  - b) 1101000

**[P.T.O.]**

**PART - B**

**II. Answer any Five questions. Each question carries 6 marks. (5×6=30)**

13. Explain star network topology in detail.
14. Explain TCP/IP reference model.
15. Differentiate between data gram and virtual circuit approaches.
16. Explain CSMA.
17. Explain the types of transmission modes.
18. What are the goals of networking?
19. Explain IPv4 address with its classes.
20. Explain HDLC frame format.

**PART - C**

**III. Answer any Three of the following questions. Each question carries 10 marks. (3×10=30)**

21. Explain OSI reference model with a neat diagram. (10)
22. a) Explain Pure ALOHA. (5)  
b) Explain Leaky Bucket Algorithm. (5)
23. a) Explain Distance Vector Routing Algorithm. (6)  
b) Explain PPP. (4)
24. a) Explain Co-axial cable with neat diagram. (5)  
b) Explain File Transfer Protocol. (5)