



QP CODE: 24803248



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Reg No : .....

Name : .....

**I.M.C.A DEGREE EXAMINATION, MAY 2024**  
**Seventh Semester**  
Integrated MCA  
**Core - IMCA7C05 - COMPUTER NETWORKS**  
2020 Admission Onwards  
7C0FBE67

Time: 3 Hours

Maximum: 75 Marks

**Part A**

*Answer any **ten** questions  
Each question carries **3** marks*

1. What are the various design issues of the data link layer?
2. Differentiate between normal and asynchronus balanced modes of operations in HDLC.
3. List out the key design issues that occur in Computer Networks.
4. Define Hub.
5. What is Token Passing?
6. What is 10Base2?
7. Compare a piconet and a scatternet.
8. Define Virtual LAN.
9. Explain the services of Network Layer.
10. What is implicit congestion signaling?
11. What are the different layers in Frame Relay?
12. What is Asynchronous TDM ?

(10×3=30 marks)





## Part B

Answer *all* questions

Each question carries **9** marks

13. a) Explain the various framing methods used in data link layer.

OR

b) Describe the congestion control algorithms.

14. a) How collision is avoided in CSMA/CA ? Describe the different strategies used for this.

OR

b) Explain why collision is an issue in a random access protocol but not in controlled access.

15. a) Describe the steps involved in the security architecture of Bluetooth.

OR

b) What is Medium Access Control?

16. a) Explain about Routing Strategies in network layer.

OR

b) What is Virtual Circuit Switching?

17. a) What is Frame relay? Explain its Architecture.

OR

b) Explain about ATM Layers with figure.

(5×9=45 marks)

