

ROLL No:

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Total number of pages :[1]

Total number of questions:06

**MCA/ 3rd Sem**  
**Computer Networks**  
**Subject Code: MCAP1-312**  
**Paper ID :**

Time allowed: 3 Hrs

Max Marks: 60

Important Instructions:

- All questions are compulsory
- Assume any missing data

**PART A (2×10)**

- Q. 1. Answer in brief:
- (a) What are the services provided by the data link layer?
  - (b) What are the differences between internet, intranet and extranet?
  - (c) List various IP classes.
  - (d) Explain working of Router and Bridge.
  - (e) What is Personal Area Network?
  - (f) What is RARP?
  - (g) Differentiate pure ALOHA and Slotted ALOHA
  - (h) Explain briefly various network topologies.
  - (i) What is multiplexing? List its types.
  - (j) What is purpose of subnetting?

**PART B (8×5)**

- Q. 2. What is a computer network? Explain its goals and types. CO1  
OR  
Explain OSI reference model in detail. Compare it with TCP/IP reference model. CO1
- Q. 3. What do you mean by error correction and detection? Explain any one error correcting technique. CO2  
OR  
Explain sliding window protocol. CO2
- Q. 4. What is switching? Explain and differentiate various switching methods. CO3  
OR  
Explain WAN technologies in detail. CO3
- Q. 5. What do you mean by congestion control? Explain its protocols. CO4  
OR  
What is collision detection? Explain various techniques for detecting collisions. CO4
- Q. 6. What is network security? Explain its need and methods in brief. CO5  
OR  
What is Internet? Give and explain some of the applications of it. CO5