



**MCA DEGREE EXAMINATIONS: NOV/DEC 2014**

(Regulation 2013)

Third Semester

**MASTER OF COMPUTER APPLICATIONS**

P13CAT301: Computer Networks

**Time: Three Hours**

**Maximum Marks: 100**

**Answer all the Questions:-**

**PART A (10 x 2 = 20 Marks)**

1. Compare Hub with Switch.
2. How guided media differs from unguided transmission media?
3. List the four types of redundancy checks that are used in data communication.
4. Define virtual LAN.
5. Mention the responsibilities of network layer.
6. How IPv4 differs from IPv6?
7. Why does congestion occur in a network?
8. Differentiate integrated services and differentiated services.
9. Name the main divisions of domain name space.
10. What are the disadvantages of secret key encryption?

**Answer any FIVE Questions:-**

**PART B (5 x 16 = 80 Marks)**

**Q.No:11 is Compulsory**

11. List the four levels of address used in TCP/IP protocol suit. How these address supports for communication between sources to destination in the network? Explain with neat diagram.
12. What are the three phases of virtual circuit? With neat sketch, discuss each phase of virtual circuit in detail.

13. (i) How error detection and correction does happens in block coding technique? Discuss with an example. (10)
- (ii) Enumerate the key components of data link control. (6)
14. (i) Draw IP datagram format and explain the fragmentation and reassembly of IP packet in Internetworking with a scenario. (12)
- (ii) Compare distance vector and link state routing protocols. (4)
15. (i) What is three-way handshaking? Illustrate the process of connection establishment, data transfer and connection termination in TCP. (12)
- (ii) List any four types of well-known ports used by TCP? State their uses. (4)
16. (i) What is the need for DNS? Discuss the working principle of DNS. (8)
- (ii) Compare symmetric and asymmetric cryptography. (8)

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