



**MCA DEGREE EXAMINATIONS: MAY 2015**

(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. How do guided media differ from unguided media?
2. What are the differences between parallel and serial transmission?
3. What is single-bit error?
4. What do you mean by Bluetooth? What are the advantages of using Bluetooth?
5. List any four common fields in available in routing table.
6. What is the difference between a direct and indirect delivery?
7. What is well known ports? Give an examples for well-known ports used with UDP.
8. What is congestion?
9. What are the three domains of the domain name space?
10. Define network management.

**Answer any FIVE Questions:-**

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

**Q.No:11 is Compulsory**

11. i) Discuss in detail about various roles and responsibilities of the OSI Layer in detail. (10)  
ii) Explain the various types of guided media used in networks. (6)
12. i) What is the difference between wired LAN with wireless LAN? Draw the header format for the Ethernet 802.3 and explain the categories of standard Ethernet. (10)  
ii) Write short note on Virtual LAN. (6)
13. i) Find the class of the each address  
i) 00000010 00001011 00001011 11101101  
ii) 11000010 00001110 00011011 11111110  
iii) 15.23.120.8

- iv) 127.0.1.2.1
- v) 129.14.6.8
- vi) 237.15.3.1

- ii) An organization is granted the block 130.57.0.0 /16. The administrator wants to create 1024 subnets.
  - a) Find the subnet mask
  - b) Find the number of addresses in each subnet.
  - c) Find the first and last addresses in subnet 1.
  - d) Find the first and last addresses in subnet 1024.

14. How the TCP connection is established and data's are transferred in TCP? Explain. Also discuss in detail about various services offered by TCP.

15. Write short note on the following

- i) Distance vector routing
- ii) Link state routing

16. Discuss in detail about how the email messages exchange from sender to receivers.

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