

EXAM NO : -----

**GANPAT UNIVERSITY**

**M. Tech. Semester II (EC) Regular Examination, JULY 2013**

**DATA COMMUNICATIONS AND NETWORKS (3EC 203)**

**Max. Time: 3 Hrs.]**

**[Max. Marks: 70**

**Instructions:**

1. Attempt all questions.
2. Answers to the two sections must be written in separate answer books.
3. Figures to the right indicate full marks.
4. Assume suitable data, if necessary.

**SECTION I**

- |           |  |   |
|-----------|--|---|
| 1         | (A) Define the following :<br>(1) Distributed Processing (2) Reliability (3) Throughput.   | 6 |
|           | (B) Compare TCP/IP and OSI model with help of diagram.   | 6 |
| <b>OR</b> |  |   |
| 1         | (A) What is AWG? What is the use of Twist in twisted pair copper cable?  | 6 |
|           | (B) Compare circuit switched networks with datagram networks.  | 6 |
| 2         | (A) Write short notes on stop and wait protocol.   | 6 |
|           | (B) Explain piggy-backing  | 5 |
| <b>OR</b> |  |   |
| 2         | (A) Give procedure for pure Aloha protocol.  | 7 |
|           | (B) Why energy level during collision is not helpful for collision detection in wireless networks while it is helpful in wired networks? | 4 |
| 3         | (A) Why signaling system is required? Give five points to support your answer  | 5 |
|           | (B) Why bandwidth used for data is less than bandwidth used for voice in dial up modems?   | 4 |
|           | (C) How we can increase the bandwidth of existing local loops of 4Khz in context with telephone network ?                                | 3 |

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SECTION-II

- 4 (A) How we can increase the bandwidth of standard Ethernet? Explain Ethernet evolution through four generation. 6  
(B) Write short notes on IPv 4 addresses. 6  
OR
- 4 (A) Give features of frame relay 6  
(B) Compare pure ATM LAN with Legacy ATM LAN also give importance of VPI and VCI in context of ATM. 6
- 5 (A) Compare path, line and section in simple circuit using SONET equipment with the help of suitable diagram. 6  
(B) Write short notes on add/drop multiplexer and give the importance of it in communication. 5  
OR
- 5 (A) Give any six technical specifications of Bluetooth and explain them in detail. 6  
(B) List out duties of L2CAP for Bluetooth. 5
- 6 (A) Compare repeater with amplifier and differentiate bridge with the repeater What is active hub? 6  
(B) What is the use of transparent bridge in networks? Explain the concept of spanning tree 6

THE END OF PAPER

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