

GANPAT UNIVERSITY

B. Tech. Semester: IV (Computer Engineering / Information Technology)

Regular Examination May 2014

2CE404/2IT404: Basic of Communication Systems

[Time: 3 Hours]

[Total Marks: 70]

Instructions:

1. Figures to the right indicate full marks
2. Each section should be written in a separate answer book
3. Be precise and to the point in your answer

Section – I

- Que. – 1 a. Define Topology. List out the network topologies. Explain all with diagram. [6]
b. Explain TCP/IP Protocol Suite in detail. [6]
- OR
- Que. – 1 a. Discuss categories of Networks with diagram. [6]
b. Discuss OSI model in brief. [6]
- Que. – 2 a. Explain Broadband Transmission of digital signal. [4]
b. Discuss Digital-To-Analog conversion in detail. [7]
- OR
- Que. – 2 a. What is the theoretical capacity of the channel when bandwidth is 200KHz and SNR_{dB} is 6. [4]
b. Explain Baseband transmission of digital signal in detail. [7]
- Que. – 3 a. Differentiate Synchronous and Statistical Time Division Multiplexing. [4]
b. Discuss following terms. [8]
(i) Jitter (ii) Composite Signals (iii) Carrier frequency (iv) Wavelength

Section – II

- Que. – 4 a. List out Block coding scheme. Explain any one scheme. [6]
b. Differentiate between circuit-switched, datagram and virtual-circuit networks. [6]
- OR
- Que. – 4 a. List out scrambling techniques. Explain any one technique. [6]
b. Explain structure of circuit-switches & packet-switches in detail. [6]
- Que. – 5 a. Differentiate PCM and DM. Discuss modulator and Demodulator in DM. [6]
b. Categorize the DSL technologies. Explain ADSL and VDSL. [5]
- OR
- Que. – 5 a. List out the types of transmission mode. Explain serial transmission mode in detail. [6]
b. Categorize types of switches in circuit switch network. Explain it in detail. [5]
- Que. – 6 a. What is the difference between guided and unguided media and also explain propagation modes of fiber-optic cable. [6]
b. Explain Datagram networks. What is the total delay in Datagram network? [6]

END OF PAPER