

**G 1691**

(2 pages)

**Reg. No.....**

**Name.....**

**B.TECH. DEGREE EXAMINATION, MAY 2005**

**Fifth Semester**

**Branches – Computer Science and Engineering/Information Technology**

**DATA COMMUNICATION – (R, T)**

**(New Scheme – 2002 Admission onwards)**

**Time : Three Hours**

**Maximum : 100 Marks**

*Answer all questions in Part A.  
Each question carry equal marks.*

**Part A**

1. What is modulation ? What is the need for modulation ?
2. State sampling theorem. Explain.
3. Explain how multiplexing done using frequency division method.
4. Explain how information rate and channel capacity are related.
5. Briefly explain synchronous digital transmission.
6. Compare half duplex and full duplex modes of data transmission.
7. Describe any one method of correcting single bit error.
8. Name any four transmission codes. Explain any one.
9. Describe point to point and multi drop lines.
10. Write short note on GSM services.

(10 × 4 = 40 marks)

**Part B**

11. Explain AM and FM. Differentiate between them.  
*Or*
12. Draw the block diagram of PWM. Explain its operations.
13. How synchronous TDM differs from asynchronous TDM.  
*Or*
14. Compare and contrast ASK, FSK, PSK schemes.

**Turn over,**

15. Explain in detail different types of noises and its effect in digital data transmission.

*Or*

16. Explain the terms circuit switching and packet switching compare.

17. Explain in detail how coding can be performed using convolution codes.

*Or*

18. Describe all different ARQ techniques used for error detection and correction.

19. Draw a diagram showing all blocks of computer communication systems. Explain.

*Or*

20. Explain in detail any three transmission media and compare their transmission speed.

(5 × 12 = 60 marks)

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