

G 1627

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Reg.No.....

Name.....

B.Tech. DEGREE EXAMINATION, JULY/AUGUST 2007

Fifth Semester

Branch – Computer Science and Engineering / Information Technology

DATA COMMUNICATION (R, T)

(Improvement / Supplementary)

Time : Three Hours

Maximum : 100 Marks

Part A

Answer all questions.

Each question carries 4 marks.

1. How are FM and PM related to angle modulation ?
2. State the sampling theorem.
3. Can a TDM PCM system use digital and analog inputs simultaneously ? If not, why?
4. Explain the message switching principle in digital communication.
5. What is the fundamental difference between asynchronous and synchronous transmission ?
6. Which of the switching techniques use dynamic use of bandwidth ?
7. How are single bit errors detected in Hamming code ?
8. What is CRC ? Where does one find its use effectively ?
9. What is unguided transmission ? Give an example.
10. What are concentrators ? How are they useful in communication ?

(10 × 4 = 40 marks)

Part B

Answer all questions.

Each question carries 12 marks.

11. With a block diagram, explain the generation of PCM.
Or
12. Compare and contrast PAM with PWM.
13. Explain, with a diagram, time division multiplexing scheme ?
Or
14. Compare Differential Binary Phase Shift keying with PSK highlighting its advantages over the other.

Turn over

15. In what ways do packet switching technologies gain over circuit switching? Cite examples and explain.

Or

16. In a differential BPSK modulation, binary '0' results in a phase change of π and binary 1 does not cause any phase change. Write the phase states of the carrier for the sequence 10110001.
17. Explain the use of block codes. Give *two* specific examples and enumerate their features.

Or

18. Explain in detail how ARQ techniques are used in error recovery. How are they advantageous over simplex schemes?
19. Explain in detail, with a block diagram, the make up and operation of a computer communication system.

Or

20. Compare and contrast twisted pair cables and coaxial cables taking into consideration the various transmission properties.

(5 × 12 = 60 marks)

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