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Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2014

Fourth Semester

Branch : Computer Science and Engineering

CS 010 404—SIGNALS AND COMMUNICATION SYSTEMS (CS)

(New Scheme—2010 Admission onwards)

[Regular/Improvement/Supplementary]

Time : Three Hours

Maximum : 100 Marks

Part A

Answer **all** *questions.*
Each question carries 3 *marks.*

1. Enumerate the properties of the signals. Explain any *two*.
2. Define and explain Noise. List the types of noise.
3. What is the difference between PPM and PDM ? Explain in detail.
4. What is the principle of WDM ? Mention the types of WDM.
5. Explain the properties of hamming codes.

(5 × 3 = 15 marks)

Part B

Answer **all** *questions.*
Each question carries 5 *marks.*

6. Define and explain CTFS.
7. Differentiate Twisted pair from coaxial cables. Explain.
8. What is OOK ? Bring out its mathematical representation.
9. Explain the principles of Half and full duplex transmissions with neat diagrams.
10. Give an account on "Baudot code".

(5 × 5 = 25 marks)

Part C

Answer **all** *questions.*
Each question carries 12 *marks.*

11. (i) State and explain sampling theorem.

    (ii) Prove the properties of CTFS.

Or

12. Differentiate continuous time signals from discrete time signals with examples. Explain the difference.

Turn over

13. Define and explain the typical parameters of communication systems.

Or

14. State and explain Shannon Hartley theorem. Derive an expression for Channel capacity of a Noisy channel.

15. Explain AM, PM and FM in detail with neat diagrams. Bring out their mathematical representations.

Or

16. Compare and contrast the parameters of different modulation formats. Explain the comparison in detail.

17. Explain the principles of TDM and FDM in detail with neat diagrams.

Or

18. Explain the basic concept of SONET with neat diagrams.

19. Explain the properties and advantages of Linear block codes. Drive its code vector.

Or

20. Write technical notes on :

    (i) EBCDIC ;

    (ii) Parity coding ;

    (iii) Syndrome Calculator.

(5 × 12 = 60 marks)