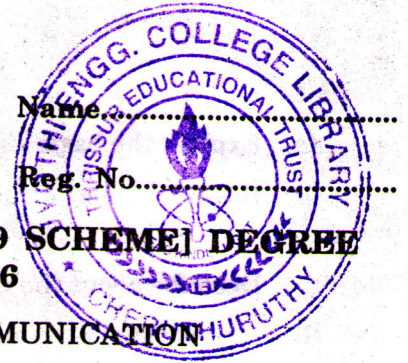**D 11964**

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SEVENTH SEMESTER B.TECH. (ENGINEERING) [09 SCHEME] DEGREE EXAMINATION, NOVEMBER 2016

EE/PTEE 09 702—ANALOG AND DIGITAL COMMUNICATION

Time : Three Hours

Maximum : 70 Marks

Part A

Answer all questions.

1. What is Amplitude modulation ?

2. What is white noise ?

3. Compare analog pulse modulation scheme with digital pulse modulation scheme.

4. Write the principle of PSK.

5. What is the purpose of power line carrier communication ?

(5 × 2 = 10 marks)

Part B

Answer any four questions.

6. Differentiate pre-emphasis and de-emphasis with an example.

7. Discuss the properties of Gaussian random process.

8. Explain the basic concept of packet switching ?

9. Write short notes on ASK and FSK.

10. What is the need for coupling in power line communication ?

11. Explain about FET Transmitter.

(4 × 5 = 20 marks)

Part C

Answer all questions.

12. (a) What is Modulation? Briefly explain the modulator and demodulator with circuits.

(10 marks)

Or

(b) Explain the operation of Foster-Seeley Discriminator with neat circuit diagrams.

(8 marks)

(c) State the advantages of Modulation.

(2 marks)

13. (a) With necessary equations explain the convolution theorem.

(5 marks)

(b) Explain sampling and reconstruction with examples.

(5 marks)

Or

Turn over

    (c) Explain the basic signalling schemes in digital communications. (5 marks)

    (d) Briefly discuss about Einstein theorem. (5 marks)

14. (a) Describe about the matched filter receiver and its properties. (6 marks)

    (b) Discuss about the circuit switching. (4 marks)

Or

    (c) What is Digital pulse modulation ? Explain in detail about the Delta modulation scheme.

(10 marks)

15. (a) Discuss the types of coupling in power line communication with diagrams.

(10 marks)

Or

    (b) State the applications of power line communications. (2 marks)

    (c) Describe the digital PLCC with suitable diagram. (8 marks)

[4 × 10 = 40 marks]