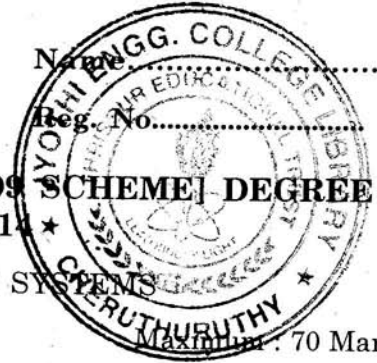


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SEVENTH SEMESTER B.TECH. (ENGINEERING) [09 SCHEME] DEGREE  
EXAMINATION, NOVEMBER 2014

AI 09 703—ELECTRONIC COMMUNICATION SYSTEMS

Time : Three Hours

Maximum : 70 Marks

**Part A**

Answer **all** questions.

Each question carries 2 marks.

1. Define Modulation Index.
2. Define selectivity and sensitivity.
3. What is signal to noise ratio ?
4. What is delta modulation ?
5. What are the advantages of synchronous satellite communication ?

(5 × 2 = 10 marks)

**Part B**

Answer any **four** questions.

Each question carries 5 marks.

6. Explain ring modulator.
7. Describe the working of rhombic antenna.
8. Explain AM broadcast receiver.
9. Draw ASK, FSK and PSK signal to transmit data stream -1111000111.
10. Explain Optical Fiber Losses.
11. Describe Standards of Telemetry.

(4 × 5 = 20 marks)

**Part C**

Answer section (a) **or** section (b) of each question.

Each question carries 10 marks.

12. (a) Discuss frequency modulation and frequency spectrum of FM wave.

Or

- (b) Describe the working of balanced modulator.

Turn over

13. (a) How can you generate PWM and PPM with the help of a monostable Multivibrator. Draw and explain with circuit diagrams.

*Or*

- (b) Explain in detail why signal conversion by using two IF is used in communication receivers. How is variable bandwidth achieved in these receivers ?
14. (a) Explain the working principle of ASK modulator and demodulator using relevant diagrams.

*Or*

- (b) Describe frequency division multiplexing.
15. (a) Describe what is meant by saying that a satellite is stationary. Why are such satellite used for world wide communication in preference to any other kind ?

*Or*

- (b) Explain the working of Electrical Telemetry using a neat diagram.

(4 × 10 = 40 marks)