(041140402/446141B)

M.Sc. DEGREE EXAMINATION, APRIL 2018

FOURTH SEMESTER

Branch – Physics

Paper IV — ELECTRONICS – WIRELESS COMMUNICATION SYSTEMS

Time : 3 Hours *Max. Marks : 70*

PART – A

Answer any FOUR questions. Each question carries 5 marks.

Each answer should not exceed 250 words.

(Marks : 4 × 5 marks = 20 marks)

1. Mention different types of digital modulation techniques.
2. Explain the properties of Gaussian probability function.
3. What is Parity? How is it useful in error detection?
4. Briefly explain different types of ARQs.
5. What is GSM? Briefly explain.
6. Explain what is meant by fading.
7. Outline briefly the satellite frequency bands.
8. Explain how multiplexing is done in optical communication.

PART – B

Answer ALL questions.

Each question carries 12½ marks.

(Marks : 4 × 12½ marks = 50 marks)

9. (a) Explain M-ary techniques.

   (b) What is meant by inter symbol interference? Explain with diagram.

Or

   (c) What is meant by scrambling? Explain with an example.

   (d) Explain the significance of error.

[P.T.O]

10. (a) Explain briefly about the decoding of convolution codes.

(b) Explain the tree and trellis diagrams.

Or

(c) Explain the sequential decoding.

(d) What are interleaving techniques? Explain them.

11. (a) With neat block diagrams explain the transmission and receiving systems in wirel communication.

Or

(b) What is spread spectrum modulation? Explain.

(c) Explain what is multiple access technique as applied to wireless communication.

12. (a) With necessary diagrams and waveforms, discuss the satellite communication syste

Or

(b) Explain different sources and detectors used in optical communication.

(c) Briefly explain optical network : SONET.
