Reg. No. : | | | | | | | | | | |

Question Paper Code: 31541

B.E. / B.Tech. DEGREE EXAMINATION, NOVEMBER 2015

Fifth Semester

Electronics and Communication Engineering

01UEC501 – DIGITAL COMMUNICATION

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. State the advantages of digital communication over analog communication.
2. State the classification of channels.
3. What is natural sampling?
4. What is meant by temporal waveform coding?
5. What is the use of eye pattern?
6. State the principle of maximum likelihood detectors.
7. Draw the spectral representation of ASK and PSK.
8. What is meant by coherent detection?
9. Define pseudo-noise sequence.
10. Define process gain.

PART - B (5 x 16 = 80 Marks)

11. (a) Draw the block diagram of digital communication systems and explain each block in detail. (16)

Or

(b) Explain the geometric representation of signals. (16)

12. (a) Explain natural sampling and flat top sampling. (16)

Or

(b) With neat block diagram, explain pulse code modulation and demodulation. (16)

13. (a) Explain adaptive equalization with neat diagram. (16)

Or

(b) Explain the working of a correlator type receiving filter. (16)

14. (a) Discuss the representation and spectral characteristics of ASK, FSK and QAM. (16)

Or

(b) Explain the working of a QPSK schemes with its transmitter and receiver block diagrams. (16)

15. (a) What is spread spectrum technique? Explain in detail about direct sequence spread spectrum techniques with necessary diagrams. (16)

Or

(b) (i) List and prove the properties of PN sequence. (8)

(ii) Write short notes on frequency hopping. (8)