

Reg. No. :

--	--	--	--	--	--	--	--	--	--

Question Paper Code: 35041

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2017

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. Define channel. What are the types of channel.
2. Bring out any two merits and demerits of digital communication.
3. State sampling theorem.
4. How can BER be improved?
5. What is inter symbol interference?
6. What is the use of eye pattern?
7. List any two remedy to reduce ISI.
8. What is meant by coherent detection?
9. Define process gain.
10. What is anti jam?

PART - B (5 x 16 = 80 Marks)

11. (a) Explain the geometric representation of signals. (16)

Or

(b) Explain in detail the Gram-Schmidt orthogonalization procedure. (16)

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

Or

(b) Explain in detail about non-uniform quantization technique. (16)

13. (a) Derive and Explain the Nyquist first criterion to minimize ISI. (16)

Or

(b) Explain adaptive equalization with neat diagram. (16)

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

Or

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

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

Or

(b) (i) Derive the performance parameters of a DSSS system. (10)

(ii) List and prove the properties of PN sequence. (6)