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B.Tech. 4th Semester (ECE) Examination, May–2016

COMMUNICATION SYSTEM

Paper–EE-206-F

ime allowed : 3 hours]   *[Maximum marks : 100*

*Jote : Attempt five questions out of 9 questions. **Question No. 1 is compulsory** and attempt **one** question from each of the four sections.*

- (a) Write Dirichlet's condition for fourier series.   4
- (b) Explain even and odd function.   4
- (c) Define Modulation index for A.M.   4
- (d) What is aliasing and how it can be reduced.   4
- (e) What is uniform linear quantization.   4

Section–A

. Classify signals and systems.   20

. Describe the following :

- (a) Modulation
- (b) Fourier analysis of signals
- (c) Base band transmission.   20

Section–B

- (a) What is DSB-SC modulation ? Explain how the ring modulator for generations of DSB-SC wave act as demodulator.   10
- (b) What do you mean by vestigial sideband modulation and its application.   10

5. (a) Difference between AM and FM. Why FM is better.

     10

    (b) Explain wide band frequency modulation. 10

Section–C

6. (a) State and prove sampling theorem in time domain.

     10

    (b) Explain modulation and demodulation of PTM.

     10

7. (a) Explain delta modulation with suitable diagrams.

     10

    (b) Calculate channel capacity of PCM and DM. 10

Section–D

8. (a) Describe QPSK in detail.   10

    (b) Explain receivers of M-ary PSK. 10

9. (a) Discuss about internal and external noise and S/N ratio.

     10

    (b) What do you mean by transit time noise. 10