elex 4 sem fundamentals of commination engineering dec 2015 QP Code :

(3 Hours) Total Marks : 80

N.B. : (1) Question No. 1 is compulsory.
    (2) Solve any **three** questions from remaining **five** questions.
    (3) Assume **suitable data** if **necessary**.

1. Give brief answers to any **four** :—   **a2zSubjects.com**   20
    (a) What is delta modulation ?
    (b) Define the terms signal to noise ratio, noise temperature and noise figure.
    (c) What is need of modulation ?
    (d) State and explain sampling theorem.
    (e) Write advantages of SSB modulation.

2. (a) Explain Ring modulator.   10
    (b) An Am broadcast station has modulation index which is 0·75 on the average.   10
    What would be its average power saving, if it could go over to single sideband suppressed carrier transmissions, while having to maintain the same signal strength in its reception area.

3. (a) Write note on carson rule and explain working of superhetrodyne AM   10
    receiver.
    (b) Explain the Armstrong frequency modulation system with the help of block   10
    diagram.

4. (a) With respect to radio receiver. Explain :—   10
    (i) Sensitivity   (iii) Image frequency
    (ii) Selectivity   (iv) Double spotting
    (b) Explain superhetrodyne radio receiver.   10

5. (a) Compare PAM, PWM and PPM.   10
    (b) Explain what is meant by quantisation noise and comment on Adaptive   10
    delta modulation.

6. Write short notes on any **four** :—   20
    (a) Pre-emphasis and de-emphasis
    (b) Time Division multiplexing
    (c) Pulse code modulation   **a2zSubjects.com**
    (d) Electromagentic spectrum
    (e) AGC

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