Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

Roll No .....

EX-601 (GS)

B.E. VI Semester

Examination, May 2018

Grading System (GS)

Communication Engineering

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Find the Fourier Transform of a periodic impulse function. 7

   b) What is Central Limit theorem? Consider any two functions and find their joint PDF. 7

2. a) Write short notes on: 7
   i) Deterministic signals
   ii) Energy signals

   b) What is the need of Modulation? Explain and compare AM and FM systems. 7

3. a) Describe the working of the single sideband modulation with the help of necessary equations and sketches. 7

   b) Write a note on stereophonic FM broadcasting. 7

4. a) Write down the limitations of conventional tubes at microwave frequencies? Explain the working principle of reflex klystron with the help of a block diagram. 7

   b) Discuss the working and construction of PIN diode. 7

5. a) Discuss the working and application of IMPATT and TRAPATT. 7

   b) What are the limitations of TRF receiver? Explain the necessity of heterodyning. Explain superheterodyne receiver with the help of diagram. 7

6. a) Explain PCM technique. How quantization error can be minimized? Write down the advantages and disadvantages of PCM. 7

   b) Explain QPSK system with diagrams. What is its bandwidth? How is it different from BPSK? 7

7. a) Explain the working principle of a satellite communication system. Draw the block diagram and also explain the frequency bands used in satellite communication. 7

   b) Compare TDMA and FDMA. 7

8. Write short notes on (any three): 14
   a) Satellite Link calculation
   b) VSB modulation
   c) LASER
   d) AGC and AVC
   e) Parametric amplifiers

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