Roll No .....

EX-601

B.E. VI Semester

Examination, June 2016

Communication Engineering

Time : Three Hours

Maximum Marks : 70

Note: i) Answer five questions. In each question part A, B, C is compulsory and D part has internal choice.
ii) All parts of each questions are to be attempted at one place.
iii) All questions carry equal marks, out of which part A and B (Max.50 words) carry 2 marks, part C (Max.100 words) carry 3 marks, part D (Max.400 words) carry 7 marks.
iv) Except numericals, Derivation, Design and Drawing etc.

1. a) What are the uses of Convolution?
   b) List the applications of central limit theorem.
   c) What is Fourier transform, write down its properties.
   d) Write short notes on :
      i) Non periodic signal
      ii) Deterministic signal

      OR

      Explain the energy and power signals with their mathematical form.

2. a) Draw the block diagram of a typical communication system.
   b) What do you mean by Modulation Index?

   c) Differentiate between Narrow and Wide band FM.
   d) What is pre-emphasis and de-emphasis?

      OR

      Compare different AM systems (DSB-SC, SSB).

3. a) What is microwave integrated circuit diodes?
   b) What are the limitations of conventional microwave tubes?
   c) Explain Gun effect.
   d) Discuss the working and construction of PIN diode.

      OR

      Compare TRAPATT and IMPATT.

4. a) List the limitations of TRF receive.
   b) What is AGC, discuss in brief.
   c) What is the need of heterodyning?
   d) Describe Noise BW and effective noise temperature.

      OR

      Compare QPSK and QAM.

5. a) What is FDMA?
   b) Give the frequency range / band for satellite communication.
   c) What do you mean by Transponders?
   d) Explain the working principle of a satellite communication system with suitable block diagram.

      OR

      What do you mean by link calculations? Write down the steps involved.

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