2371

मुख - 016

Communication System Design
(1090)

P. Pages : 2

Time : Three Hours

Max. Marks : 100

Instructions to Candidates :
1. Do not write anything on question paper except Seat No.
2. Answersheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Attempt **any five.** Each questions carries equal marks.
5. Draw well label diagram and assume suitable data wherever necessary.

1. a) Explain different types of path loss in wireless channels.

   b) Explain different parameters of mobile multipath channels.

2. a) Explain BPSK in detail with waveforms.

   b) Explain the difference between TRF and Super - heterodyne receiver Architecture.

3. a) Discuss the radio wave propagation issues in personal wireless systems.

   b) Write short notes on.

      i) Channel model.

      ii) Envelop fading.

4. a) Derive the Friss Formula for Noice.

   b) Explain the Filter design concept for the Receiver.

5. a) Discuss the matching of imaginary part in Narrowband LNA Design.

   b) Explain differential LNA with suitable circuit diagram.

6.   a)   Discuss Voltera series in distortion, high frequency case of Gilbert mixer.

    b)   Explain in detail for Gilbert Mixer.

       i)   Conversion gain.

       ii)   Balancing.

7.   a)   Analyze Law frequency distortion in Gilbert mixer.

    b)   Explain various features for a demodulator in communication.

8.   a)   Explain any A/D converter used in Receiver with suitable diagram.

    b)   What is design entry for wireless system design ? Explain various simulation tools used in it.

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