



Communication System Design (1090)

P. Pages : 1

Time : Three Hours

Max. Marks : 100

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
 2. Answer sheet 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 whenever necessary.
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1. a) Explain different types of multipath fading.
b) Compare Flat / Frequency selective and slow / Fast Fading.
 2. a) Compare BPSK and MSK.
b) Explain the difference between TRF and Super-heterodyne receiver Architecture.
 3. a) Explain the frequency selective multipath fading.
b) Describe various design parameters in Receiver design.
 4. a) Explain the Filter design concept for the Receiver.
b) Analyze the noise in unbalanced mixer.
 5. a) Compare Wideband and Narrowband LNA.
b) Explain differential LNA with suitable circuit diagram.
 6. a) In high frequency analyze the distortion in Gilbert mixer.
b) Explain in detail for Gilbert Mixer :
i) Conversion gain ii) Balancing.
 7. a) Analyze Low frequency distortion in Gilbert mixer.
b) Describe Non – Ideal Integrator in detail.
 8. a) Explain any A/D converter used in Receiver with suitable diagram.
b) Explain various validation methods used in design technology for wireless communication.
