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# E13

## B. Tech. EXAMINATION, 2020

(Fifth Semester)

(B-Scheme) (Re-appear Only)

EE, EEE & IC

ECE311B

INTEGRATED ELECTRONICS

*Time :* 2½ *Hour*s] [*Maximum Marks :* 75

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Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

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**Note** : Attempt *Four* questions in all. All questions carry equal marks.

**1.** (a) Explain distortions in amplifiers.

(b) What is the effect of emitter bypass capacitor on low frequency response of an amplifier ?

**2.** Give analysis of transistor amplifier circuit using hybrid parameters at low frequencies.

**3.** Draw and explain different types of feedback topologies.

**4.** (a) Explain RC phase shift oscillator with proper illustrations and mathematical expressions.

(b) Explain Barkhausen cretarian.

**5.** (a) Explain and Draw Circuit diagram of push pull amplifiers.

(b) What is harmonic distortion ?

**6.** (a) List six characteristics of ideal OPAMP.

(b) Define CMMRR, Common mode signal, Difference mode signal and offset voltages.

**7.** (a) Draw circuit and explain voltage to current converter.

(b) Explain Integrator with circuit diagram and mathematical expression.

**8.** (a) Explain Sample and hold circuit.

(b) Explain Logarithmic amplifier with circuit diagram and mathematical expression.