

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (ECE) (Sem.-3)
ANALOG DEVICES & CIRCUITS

Subject Code : BTEC-301

M.Code : 96260

Date of Examination : 09-12-2025

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Write briefly :

- a) Define LCD.
- b) How many types of photodiodes are available? Name them.
- c) Explain JFET.
- d) What do you mean by bias stability?
- e) Describe crossover distortion.
- f) What is harmonic distortion?
- g) Differentiate between amplifiers and oscillators?
- h) Give the feedback concept in oscillators?
- i) What is the principle of oscillators?
- j) Draw transistor hybrid model.

SECTION - B

2. Draw and explain analysis of temperature dependence of PN diode.
3. Give characteristics and applications of MOSFET.
4. Draw and explain Class -B push-pull amplifier.
5. Derive the expression for frequency and amplitude of RC phase shift oscillator.
6. Explain high frequency T model in transistors.

SECTION - C

7. Explain different types of transistor configurations.
8. Draw and explain complementary-symmetry amplifier in detail.
9. Explain frequency response of Sinusoidal oscillators.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.