SHAHEED BHAGAT SINGH STATE TECHNICAL CAMPUS, FEROZEPUR

ROLL No: | | | | | | | | | | | | Total number of pages:[1]
Total number of questions: 06

B.Tech. || ECE|| 5th Sem

Linear Integrated Circuits

Subject Code: BTEC-503

Paper ID:

Time allowed: 3 Hrs **Max Marks: 60**

Important Instructions:

- **All questions are compulsory.**
- **Assume any missing data**

PART A (2×10)

Q. 1. Short-Answer Questions:
(a) Write a short note on All Pass Filter.
(b) Explain the V-I characteristics of Zener Diode.
(c) Compare Fixed and Adjustable Voltage Regulators.
(d) Draw the block diagram of Ideal and Practical OP-amp.
(e) What is Barkhausen's Criteria?
(f) Draw the pin diagram of IC 555 Timer.
(g) What is the function of Voltage Regulator?
(h) Define CMRR ratio.
(i) What do you mean by Schmitt Triggering?
(j) Explain Cascaded amplifier.

PART B (8×5)

Q. 2. Evaluate voltage gain for Dual Input Balanced Output differential amplifier. CO1

OR

Evaluate Output resistance for SIBO differential amplifier. CO1

Q. 3. Explain Differential, Inverting and Non-inverting Op-amp in open loop mode. CO2

OR

Explain the different techniques to minimize output offset voltage. CO2

Q. 4. Explain in detail the working and applications of instrumentation amplifier. CO3

OR

Explain in detail the working and applications of Wein Bridge Oscillator. CO3

Q. 5. Utilize the IC 555 timer as Mono-stable Multi-vibrator, Discuss in detail. CO4

OR

Design a power supply using Zener diode as a voltage regulator. CO4

Q. 6. How the Peak Detector used to generate Square wave. CO3

OR

Design a Second Order Butterworth High Pass Filter. CO3