

Roll No.

Total No. of Pages : 02

Total No. of Questions : 18

**B.Tech. (ECE) (Sem.-5)**  
**LINEAR INTEGRATED CIRCUITS**  
Subject Code : BTEC-503-18  
M.Code : 78299

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**

**Write briefly :**

- 1) Why positive feedback is used in oscillator?
- 2) Define slew rate?
- 3) Define first order low pass filter. What does order of a filter signifies?
- 4) What is input offset voltage?
- 5) Give pin configuration of IC 555 timer.
- 6) State difference between integrator and differentiator and give one application of each.
- 7) What is scaling amplifier?
- 8) Write a short note on fiber optic IC.
- 9) List the applications of video amplifier.
- 10) Discuss the concept of adjustable voltage regulator.

### SECTION-B

- 11) Discuss the design of dual input unbalanced output differential amplifier.
- 12) Define IC's and discuss its various types.
- 13) What is an all pass filter? Where and why is it needed?
- 14) Explain operating principle and applications of IC 565.
- 15) Compare AC and DC amplifiers in detail.

### SECTION-C

- 16) Explain working of Wein bridge oscillator with neat circuit diagram.
- 17) Discuss analog multiplier ICs (MPY634 KP) and their applications in detail.
- 18) Write a brief note on :
  - i) Effect of variation in power supply voltages on offset voltage.
  - ii) Common mode configuration and Common mode rejection ratio.

**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.**