# SATHYABAMA UNIVERSITY

**(Established under section 3 of UGC Act, 1956)**

Course & Branch: B.E - EEE
Title of the paper: Analog Integrated Circuits
Semester: IV Max. Marks: 80
Sub.Code: 6C0080 Time: 3 Hours
Date: 24-04-2008 Session: FN

PART – A (10 x 2 = 20)

Answer All the Questions

1. What is meant by slew rate of an Op-amp?

2. Write the ideal characteristics of Op-amp.

3. Write the operation of precision rectifier.

4. Write the concept of summing amplifier.

5. Draw the internal blocks of PLL.

6. Draw the circuit of FSK modulator.

7. Write the operation of flash type ADC.

8. Write the advantage of R-2R ladder circuit.

9. List the applications of timer.

10. Write the basic principle of switched capacitor filter.

PART – B (5 x 12 = 60)

Answer All the Questions

11. Discuss the principle of monolithic IC operational amplifier.

(or)

12. Explain the frequency compensation techniques.

13. (a) Draw the circuit of instrumentation amplifier and explain.
    (b) Write the concept of V-I converter.

(or)

14. (a) Discuss the operation of antilog amplifier. (8)
    (b) Write the concept of tuned amplifier. (4)

15. (a) Explain the principle of four quadrant multiplier.
    (b) Write the concept of frequency synthesizer.

(or)

16. Explain the operation of voltage controlled oscillator with neat diagrams.

17. Discuss the operation of dual slope ADC.

(or)

18. Explain the principle of sample and hold circuits.

19. Discuss the principle and applications of video amplifiers.

(or)

20. List the types of voltage regulators and explain their operation.