C 40960

(Pages : 2)

Name.................................

Reg. No...............................

FOURTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION APRIL 2013

AI 09 403—LINEAR INTEGRATED CIRCUITS AND APPLICATION

(2009 Scheme)

[Regular/Supplementary/Improvement]

Time : Three Hours

Maximum : 70 Marks

Part A

Answer all questions.

1. What is a planar process ?

2. Define CMRR and slew rate.

3. What is the purpose of current mirror explain ?

4. How zero-crossing detector works ?

5. Design a notch filter for notch frequency of 60 Hz.

$(5 \times 2 = 10 \text{ marks})$

Part B

Answer any four questions.

6. Explain about differential amplifier.

7. Explain the frequency response of op-amp.

8. Explain the operation of V to I convertor.

9. Explain the operation of squarewave generator.

10. Write a note on the switched capacitor filter.

11. Explain the working of timing mark generator.

$(4 \times 5 = 20 \text{ marks})$

Part C

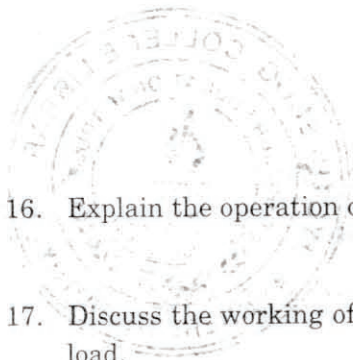12. Describe the fabrication of an IC using monolithic technology with suitable figures.

Or

13. Discuss the large signal operation of differential amplifier and operation of Ga As amplifier.

14. Analyse the DC and AC characteristic of op-amp in detail.

Or

15. Explain the internal circuit of op-amp.

Turn over

16. Explain the operation of Instrumentation amplifier, Integrator and logarithmic amplifier.

Or

17. Discuss the working of precision rectifier, analog multiplier and V to I converter with grounded load.

18. Explain the design steps involved in design of Bandpass filter, universal active filter and Wien bridge oscillator.

Or

19. Discuss briefly about Astable multivibrator, sawtooth generator and highpass filter.

$(4 \times 10 = 40$ marks)