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**Question Paper Code : 23388**

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2013.

Fifth Semester

Electrical and Electronics Engineering

EC 1313 — LINEAR INTEGRATED CIRCUITS

(Common to Fourth Semester Electronics and Instrumentation Engineering and Instrumentation, and Control Engineering)

(Regulation 2004/2007)

(Common to B.E. (Part-Time) Fourth Semester Electrical and Electronics Engineering Regulation 2005)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Why is aluminum used for metallization?
2. List the advantages of MBE.
3. State ideal opamp characteristics.
4. Define input offset voltage.
5. Where is the instrumentation amplifier used?
6. Define conversion time.
7. Define duty cycle.
8. Define lock range.
9. What is the advantage of using IC regulator?
10. List different types of optocouplers.

PART B — (5 × 16 = 80 marks)

11. (a) Classify IC's and the technology used in it.

Or

- (b) Describe the steps involved in IC fabrication.

12. (a) Explain series and shunt feedback amplifiers.

Or

(b) Describe summer, differentiator and integrator.

(6 + 5 + 5)

13. (a) Explain V/I and I/V converters.

Or

(b) Explain dual slope and flash type ADCs.

14. (a) Describe 555 functional blocks.

Or

(b) Explain PLL functioning and applications.

15. (a) Explain switching regulator, LM380 power amp.

Or

(b) Write short notes on opto coupler and opto electronic ic's.

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