Total No. of Questions : 10] [Total No. of Printed Pages : 2

Roll No. .....

EX–405(N)

B. E. (Fourth Semester) EXAMINATION, June, 2010

(New Scheme)

(Electrical & Electronics Engg. Branch)

ELECTRONIC DEVICES AND CIRCUITS – II

[EX – 405(N)]

Time : Three Hours

Maximum Marks : 100

Minimum Pass Marks : 35

Note : Attempt *one* question from each Unit. All questions carry equal marks.

Unit – I

1. (a) Discuss the design aspects of monolithic op-amps.
   (b) Explain the working principle of Astable multivibrator using op-amp.

Or

2. (a) Discuss the frequency compensation techniques.
   (b) Explain the working principle of logarithmic amplifier.

Unit – II

3. (a) What are active filters ? Explain the principle of working of HPF.
   (b) Explain the working principle of Bistable multivibrator using 555 timer.

Or

4. (a) Explain the working of 556 IC as function generator.
   (b) Explain the principle of working of PLL IC.

Unit – III

5. (a) Explain the working principle of ribbon type microphones.
   (b) Explain the working of multiway speaker system.

Or

6. (a) Explain the cross over network and their frequency characteristics.
   (b) Discuss the disk and crystal recording technique.

Unit – IV

7. (a) Explain the working principle of Klystron amplifier.
   (b) Explain the working of backward wave oscillator.

Or

8. Write short notes on the following :
   (i) IMPATT
   (ii) LASER

Unit – V

9. (a) Explain the working of NAND gate using DTL logic family.
   (b) Explain the use of FET as a switch.

Or

10. (a) Discuss the characteristic of TTL with Schottkey devices.
    (b) Explain the transfer characteristic of CMOS logic gates.