# EX - 405

## B.E. IV Semester

Examination, June 2013

## Electronics devices & Circuits-II

*Time : Three Hours*

*Maximum Marks : 100* *Minimum pass Marks: 35*

*Note:* Attempt all questions.
All questions carry equal marks.

1. a) What are the characteristics of an ideal OP-AMP? Explain the working of OP-AMP in inverting and non-inverting made? 10
   b) Draw the circuit diagram of instrumentation amplifier using OP-AMP and find the expression for output voltage. 10

OR

2. a) What is input/output offset voltage? Explain input offset voltages compensating network in detail? 10
   b) Explain the working of comparator using OP-AM P. 10

3. a) Draw the circuit diagram at a monostable multivibrator using 555 timer and find the expression for pulse width. 10
   b) Explain the principle of operation of the switched capacitor filter with the aid of schematic diagram. 10

OR



4. a) Draw and explain IC 555 timer as an astable multivibrator. 10
   b) Enlist the different application of 555 timer and explain each with the help of circuit diagram. 10

5. a) Explain the working principle of moving coil type loudspeaker. Also draw the constructional details and equivalent circuit. 10
   b) Write short note on multi way speaker system. 10

OR

6. a) Write short note on sound recording system. 10
   b) Explain the operation of crossover network 10

7. a) Discuss the amplification mechanism of a parametric amplifier by use of its equivalent circuit. 10
   b) Differentiate between Klystrons and TWT. 10

OR

8. a) Discuss the performance of magnetrons and list the important applications. 10
   b) Explain the performance characteristics, applications and disadvantages of MASERS. 10

9. a) Compare DTL, ITL, ECL, TTL with their characteristics. 10
   b) Explain rise and fall time in CMOS gates. 10

OR

10. a) What are the characteristics of logic families? Explain them. 10
    b) Explain TTL with their characteristics. 10

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