Total No. of printed pages = 2

ET-405/AE-II/4th Sem/2013/N

ANALOG ELECTRONICS – II

Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks for the questions.

Answer any *five* questions.

1. What is a field effect transistor ? How does it differ from a BJT ? Explain the construction and working of JFET. 2+2+5+5=14

2. Mention the characteristics of an ideal operational amplifier. Draw the circuit diagram of a differentiator and an integrator using OP-AMP and deduce the expression for the output voltage of each circuit. 4+10=14

3. What are the different types of filter circuits ? Explain with proper characteristic curves. Also explain the working of RC low pass filter. 4+4+6=14

[Turn over

4. What is Schmitt trigger ? What are its applications ? Explain the operation of a transistorized Schmitt trigger circuit.

3+3+8=14

5. What is a Multivibrator ? What are its types ? Explain the operation of any one of them.

3+3+8=14

6. What is a voltage regulator ? Why do we need this in a circuit ? Explain the working of a transistorized DC voltage regulator circuit.

2+2+10=14

7. Write short notes on any *two* : 7×2=14

(a) UJT

(b) Diode clamper circuit

(c) Sweep signal generation

(d) Differential amplifier

(e) Depletion type MOSFET.