Total No. of printed pages = 2

Et-405/AE-II/4th Sem/2014/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. Explain the construction, operation and V-I characteristics of an UJT. 14

2. Classify Field Effect Transistor (FET) and explain the working of a DE MOSFET. 4+10=14

3. Mention the ideal characteristics of an ideal Operational Amplifier. Also, with proper mathematical deductions, explain how an Op-Amp can be used as a differentiator and an integrator. 4+10=14

[Turn over

4. What do you understand by filter circuits ? Explain with proper characteristic curves. And also explain the working of a RC High-Pass filter. 9+5=14

5. What is a Schmitt Trigger ? What are its applications ? Explain the operation of a transistorized Schmitt Trigger circuit. 14

6. Differentiate between the three types of multivibrators and explain the operation of any one of them. 14

7. What do you understand by sweep signal ? What are its applications ? Describe any one method of generating a voltage sweep signal. 3+2+9=14

8. Write short notes on any *two* from the following :
   (a) BJT v/s FET
   (b) UJT Relaxation Oscillator
   (c) Diode Clamper Circuits
   (d) Differential Amplifier
   (e) DC Voltage Regulators. 2×7=14