Total No. of printed pages = 2

Et-405/AE-II/4th Sem/2013/M

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. Draw the constructional diagram, symbol and V-I characteristics of an UJT. 14

2. Classify Field Effect Transistor (FET) and explain the working of an E-only MOSFET. 4+10=14

3. State the characteristic parameters of an ideal operational amplifier. Also, explain how an op-amp can be used as an integrator and as a differentiator. 4+10=14

4. Differentiate between clipping and clamping with neat waveforms and explain the working of a combinational biased clipper. 7+7=14

[Turn over

5. Explain the working of a series type transistorised DC voltage regulator. How the efficiency of a regulator determined ? Explain. 10+4=14

6. Differentiate between the three types of multivibrators and explain the operation of a monostable multivibrator circuit. 3+11=14

7. What is a 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* : 2×7=14

   (a) BJT v/s FET

   (b) IC voltage regulators

   (c) Differential amplifier

   (d) RC low-pass and high-pass filter

   (e) Schmitt Trigger.