

Total No. of printed pages = 2

Et-405/AE-II/4th Sem/2017/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. What is FET ? Classify them. Explain the working principle of JFET. Also draw its output V-I characteristic curve. $1+2+8+3=14$
2. Name different types of switches. What are the advantages of electronic switches ? Explain how a transistor can be used as a switch. $2+3+9=14$
3. What is clipping and clamping circuit ? With a neat circuit diagram, explain the operation of different types of clamping circuit. $2+2=10=14$

[Turn over

4. What is D.C voltage regulator ? Why is it needed ? Explain with neat circuit diagram a transistorized series voltage regulator.

$$1+1+4+8=14$$

5. What is multivibrator ? Differentiate between the three types of multivibrator. Explain with a circuit diagram the operation of Bistable multivibrator.

$$1+3+2+8=14$$

6. Draw the block diagram of an Op-Amp and explain shortly each block. Also explain how an Op-Amp can be used as adder and differentiator.

$$8+3+3=14$$

7. Write short notes on any two : $7 \times 2 = 14$

(i) Clipping Circuit

(ii) Miller Sweep

(iii) UJT as relaxation Oscillator

(iv) Differential Amplifier

(v) Time base Generator.