

Total No. of printed pages = 2

Et-405/AE-II/4th Sem/2016/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. Draw the constructional diagram, symbol and V-I characteristics of a JFET. 14
2. Using neat circuit diagram, explain the working and application of a UJT relaxation oscillator. 14
3. Mention the characteristics 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 high-pass and low-pass filters and explain the working of such circuit using Resistor and Capacitor. 14

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5. What is a Schmitt Trigger ? Explain the working of a transistorised Schmitt Trigger circuit with proper waveform.  $2+12=14$
6. What are different methods of DC voltage regulation ? Explain the working of a Transistorized DC voltage regulator circuit.  $2+12=14$
7. Write short notes on any *two* of the following :  $7 \times 2 = 14$
- (a) BJT v/s FET
  - (b) Differential Amplifier
  - (c) IC Voltage Regulator
  - (d) Diode Clipper Circuit
  - (e) Multivibrators.