**Analog Circuits (EC-301) Mid-term Exam (22th Sept. 2017)**

**(Time: 2 hr 30 min)**

Total Marks: 125. Answer all questions in this (question paper) sheet in the spaces provided.

1. (15) A non-linear circuit is shown below. The op-amp is ideal with saturation voltages V­sat = 5V and Vsat= -5V. The diode has cut-in voltage Vγ = 0.6V. The power supplies are not shown.
   1. (8) Write the values of the output voltage Voand Vxfor the input voltages given below:

|  |  |  |
| --- | --- | --- |
| Vin | Vo | Vx |
| 1 V |  |  |
| -1 V |  |  |



* 1. (7) Sketch the output (V­o) vs. input (V­in) as the input is swept from -5V to +5V.

