

[4456] - 105
F.E. (Semester - I & II)
BASIC ELECTRONICS ENGINEERING
(2012 Course)

Time : 2 Hours]

[Max. Marks : 50

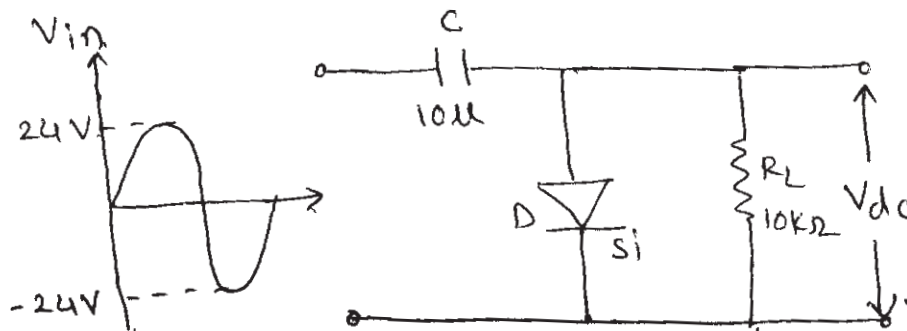
Instructions to the candidates:

- 1) *Attempt Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6, Q.7 or Q.8.*
- 2) *Figures to the right indicate full marks.*

- Q1)** a) Draw the circuit of series negative clipper and explain its operation along with the waveform. [6]
- b) Explain working of transistor as a switch. [4]
- c) Define current amplification factor for CC, CB, CE configuration. [2]

OR

- Q2)** a) Draw the waveform across R_L in clamping circuit. [6]



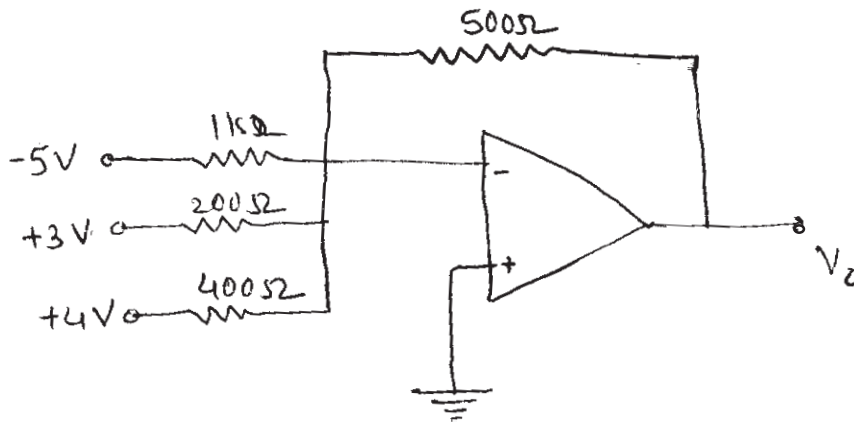
- b) Explain drain and transfer chara. of Enhancement type p-channel MOSFET. [6]

P.T.O.

- Q3)** a) Draw and explain Internal block diagram of IC 555. [6]
 b) Draw the schematic diagram & explain working of 4:1 mux and 1:4 demux. [6]

OR

- Q4)** a) Find output voltage V_o of op-amp circuit shown in fig. below: [6]



- b) State different types of counter & design 3bit negative edge triggered asynchronous down counter. [6]

- Q5)** a) Draw and explain operation of SCR using two transistor equivalent circuit. [6]
 b) Draw and explain block diagram of instrumentation system. [7]

OR

- Q6)** a) Draw constructional diagram and explain working of V-I characteristic of Diac. [6]
 b) Draw & explain the construction and operation of LVDT. [7]

- Q7)** a) Explain the elements of communication system with the help of block diagram. [7]
 b) What is baseband communication. Explain limitation of baseband communication & explain need for modulation. [6]

OR

- Q8)** a) Write the expression of Amplitude modulation. Define modulation index & draw waveform of AM. [6]
 b) Draw & explain block diagram of GSM system. [7]

