









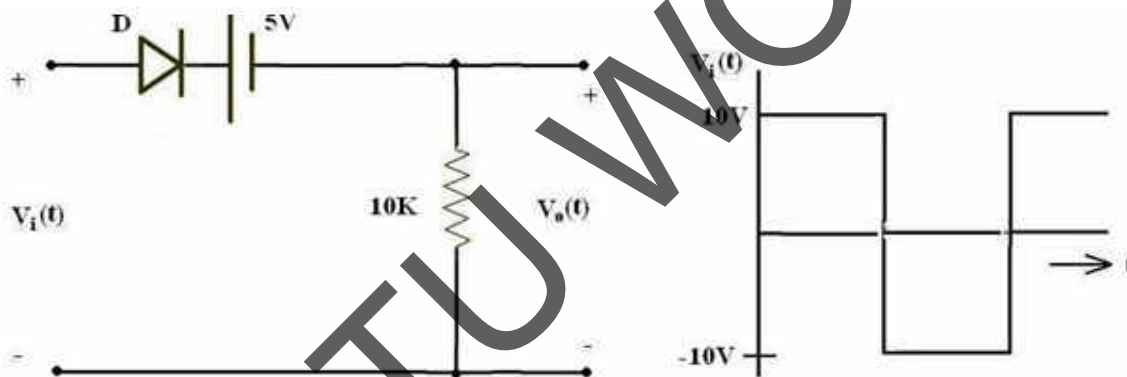
**II B. Tech II Semester, Supplementary Examinations, Dec – 2012**  
**PULSE AND DIGITAL CIRCUITS**  
 (Com. to EEE, ECE, ECC, BME, EIE)

Time: 3 hours

Max Marks: 75

Answer any **FIVE** Questions  
 All Questions carry **Equal** Marks  
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1. a) Draw the output waveform of an RC high-pass circuit with a square wave input under different time constants. Explain the same.  
 b) Explain RLC ringing circuit with a neat sketch
2. a) State and prove clamping circuit theorem.  
 b) Determine the output waveform for the biased clipping circuit for the square wave input.



3. a) Describe how a transistor functions as a switch in the CE configuration in ON state and in OFF state. How does the temperature affect the saturation junction voltages of a transistor?  
 b) Classify the basic families that belong to the bipolar families and to the MOS families.  
 What is the major difference between TTL and ECL? Why does the propagation delay occur in logic circuits?
4. a) Design a fixed-bias bistable multivibrator with supply voltages  $\pm 12V$ , an  $n-p-n$  silicon device having  $V_{CE(sat)} = 0.2 V$ ,  $V_{BE(sat)} = V_{BE} = 0.7 V$  and  $h_{FE(min)} = 50$  are used. Assume  $I_C = 5 mA$ .  
 b) What is necessity of triggering ? Explain about symmetrical and unsymmetrical triggering.

