

Code No: R1622045

**R16****SET - 1****II B. Tech II Semester Supplementary Examinations, November - 2018****PULSE AND DIGITAL CIRCUITS**

(Com to ECE, EIE, ECC)

Time: 3 hours

Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)2. Answer **ALL** the question in **Part-A**3. Answer any **FOUR** Questions from **Part-B**

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**PART -A**

1. a) If Pulse input is applied to a RC differentiator circuit ,What is the output signal and draw the wave form? 3M
- b) If  $R_f=400\Omega$ ,  $R_i=40K\Omega$ , Find 'R' of a Clamping Circuit? 2M
- c) If reverse recovery time of a diode is 10 nsec, find  $f_{max}$ ? 2M
- d) Calculate the width of hysteresis if  $UTP=7V$  and  $LTP=6.5V$  2M
- e) Define voltage time base generator? 2M
- f) What is meant by pedestal in sampling gate? 3M

**PART -B**

2. a) The limited ramp is applied to a RC differentiator circuit. Draw the Waveforms for the case, i)  $T=0.2RC$  ii)  $T=RC$  and iii)  $T=5RC$ . 7M
- b) Explain the response of RLC series circuit for step input with suitable waveforms? 7M
3. a) Design and explain the clipper circuit using two -Zener diodes? 7M
- b) Classify the clamper circuit and explain any of the circuit? 7M
4. a) Explain the behavior of BJT as a switch. Give applications. 7M
- b) With suitable diagram explain the function of a basic bistable multivibrator? List out the drawbacks with this circuit? 7M
5. a) Determine the period and frequency of Oscillation for an astable multivibrator With component values  $R_1=2K\Omega$ ,  $R_2=10K\Omega$ ,  $C_1=0.01\mu F$  and  $C_2=0.05\mu F$ . 7M
- b) With the help of circuit diagram ,explain the working of collector coupled Monostable multivibrator. 7M
6. a) Draw a simple single stage transistor miller integration circuit and explain How it behaves as a time-base circuit. 7M
- b) Draw the circuit of transistorized bootstrap generator and explain its working? 7M
7. a) State the two basic types of sampling gates and explain them 7M
- b) List the advantages and disadvantages of RTL family. 7M