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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)

**B.Tech II Year II Semester Supplementary Examinations July-2021**

**PULSE AND DIGITAL CIRCUITS**

(Electronics and Communication Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

**UNIT-I**

- 1 a Prove that a low pass circuit acts as an integrator. 6M  
b Show that a high pass circuit with a small time constant acts as differentiator 6M

OR

- 2 Classify different types of clipper circuits. Give their circuit and explain their operation. 12M

**UNIT-II**

- 3 a Explain the working of transistor as a switch and draw the output characteristics 6M  
b Write about the operation of diode as a switch. 6M

OR

- 4 Discuss the operation of collector coupled monostable multivibrator with its output waveforms. 12M

**UNIT-III**

- 5 With the help of neat circuit diagram and waveforms explain transistor miller time base generator. 12M

OR

- 6 With the help of a neat circuit diagram, explain the working of a simple current sweep. 12M

**UNIT-IV**

- 7 a Explain about unidirectional diode sampling gate. 6M  
b Write advantages and Disadvantages of sampling gate 6M

OR

- 8 With the help of neat diagram explain the working of bidirectional sampling gate using transistors? 12M

**UNIT-V**

- 9 a Compare sine wave synchronization with pulse synchronization. 6M  
b Explain the frequency division with respect to a sweep circuit. 6M

OR

- 10 a Construct a neat diagram of OR, AND & NOT gates using diodes. 6M  
b Explain the concepts of Tristate outputs 6M

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