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

B.Tech II Year II Semester Supplementary Examinations February-2022
PULSE & 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 Design high pass RC circuit for sinusoidal input. 6M
b Prove that a low pass circuit acts as an integrator. 6M

OR

- 2 a State and prove clamping circuit theorem. 6M
b With the help of a neat circuit diagram, explain the working of a two-level diode clipper. 6M

UNIT-II

- 3 a Elaborate about piece-wise linear approximation for a semiconductor diode characteristics. 6M
b Briefly explain the design of transistor switch. 6M

OR

- 4 Discuss about the Schmitt trigger circuit with neat diagram. 12M

UNIT-III

- 5 Briefly explain the working of a transistor bootstrap time base generator. 12M

OR

- 6 a Explain the working of Transistor Miller sweep circuit. 6M
b What are its advantages miller over Bootstrap sweep circuits? 6M

UNIT-IV

- 7 a Give a brief review about applications of the sampling gate? 6M
b Explain about unidirectional diode sampling gate. 6M

OR

- 8 a Discuss the function of a sampling gate used in Sampling Scopes. 6M
b Draw and explain the reduction of pedestal in a gate circuit 6M

UNIT-V

- 9 a Explain the synchronization of sweep circuit with symmetric signals. 6M
b How a sine wave frequency division is done with a sweep circuit? 6M

OR

- 10 With reference to logic gates explain the terms: 12M
(i) Fan out (ii) Noise margin (iii) Propagation delay (iv) Figure of Merit

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