

JAYPEE UNIVERSITY OF INFORMATION TECHNOLOGY, WAKNAGHAT

TEST -3 EXAMINATION-2021

B.Tech/ M.Tech3rd Semester

COURSE CODE: 18B11EC313

MAX. MARKS: 35

COURSE NAME: Electronic Devices and Circuits

COURSE CREDITS: 04

MAX. TIME: 2 Hours

Note: All questions are compulsory. Carrying of mobile phones during examinations will be treated as a case of unfair means. Each Question is of five marks.

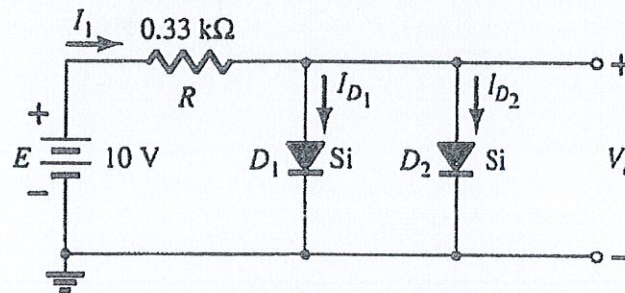
Q1. Prove that the ripple factor of half wave rectifier is 1.21 and RMS value of half-wave rectified output is $V_{rms} = \frac{V_m}{2}$, Where V_m is the maximum amplitude.

Q2. Draw the circuit diagram of the voltage divider bias circuit and derive the expression of I_B and V_{CE}

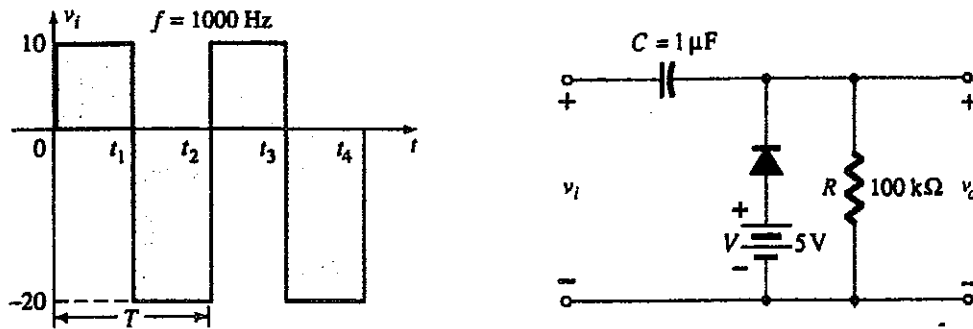
Q3. Explain Zener breakdown and Avalanche breakdown with diagram.

Q4. Explain the working of the pnp transistor with a diagram.

Q5. Determine the V_o , I_1 , I_{D1} , and I_{D2} for the given parallel diode configuration.



Q6. Determine V_o for the given network for the input indicated using a silicon diode with $V_{th} = 0.7$ Volts.



Q7. For the given emitter bias circuit, determine- I_B , I_C , V_{CE} , V_C , and V_E

