

Project name: Design a 5V DC Power Supply using Diode for a specified input

Q1: Diode er kaj ki?

Ans: Diode er main kaj AC current k DC current e convert kore. Ek dike current flow korte help kore and onno diker current flow k badha dey.

Q2: Amra D1N4002 diode use kori kno?

Ans: Amra onno diode use korle ripple voltage onk beshi pai. But amader expected ripple voltage er man chilo 0.24v. Tai amra D1N4002 diode use korsir.

Q3: Bridge rectifier er kaj ki?

Ans: wave er -/+ both side ai ek dike current flow hoy tai bridge rectifier use kore full wave k half wave e convert kore niri.

Q4: Capacitor er kaj ki?

Ans: Current store kora and filtering kora. Jokhon e voltage supply hocchilo tokhon voltage down hole ta abar up kore dey capacitor. And filtering kore ekta limit e moddhe constant rakhe voltage supply k.

Q5: Capacitor k parallel e set kora hoy keno?

Ans: Capacitor series e use korle kono kaj kore na. Value and graph same thake. Tai parallel e use korte hoy.

Q6: Capacitor er value 470uF keno deya chilo?

Ans: Capacitor er value komale ripple voltage onk beshi pawa jay.

Q7: Zener diode er kaj ki?

Ans: Zener diode forward bias e normal diode er moto kaj kore. Aitar voltage drop onk low (0.6- 0.7). Normal voltage supply jokhon zener diode er voltage er theke beshi tokhon zener diode breakdown hoy and voltage k komay ekta specific constant voltage e convert kore. Breakdown e jaway pore reverse bias kaj kore and zener diode er nijer voltage tai supply dey.

Q8: Zener diode er sathe resistor keno series e rakha hoy?

Ans: Jodi resistor use na kori tahole output e highest voltage 9v and min voltage 5v hoye jay. Resistor use kore max voltage k min voltage e convert kore ekta constant voltage supply dey.

