

Concept : forward bias

1. Observe the circuit

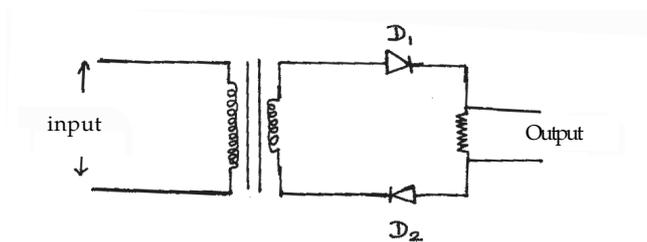


- (a) Copy the figure. Draw a diode at the portion left from the circuit so that the bulb glows. (1)
- (b) What is the name by which the mode of connecting a diode to a circuit is known so that current flows through it? (1)

Score (2) time (5 minutes)

Concept : Half and full wave rectification

2. The figure shows a rectifier made by a student connecting two diodes and a resistor to the secondary of a transformer



- (a) What is meant by rectification? (1)
- (b) When D_1 is in forward bias, how will D_2 be? (1)
- (c) What is meant by forward biasing? (1)
- (d) Will this work as a full wave rectifier? Justify the answer. (2)

Score (5) time (6 minutes)

Concept : I.C chips

3. (a) What are the components contained in an integrated circuit? (1)
- Fill in suitably.
- (b) The function of which is called the brain of the computer is done by an IC (1)
- (c) What are the advantages of IC chips ? (1)

Score (3) time (4 minutes)

Concept: Amplification

4. Write any one situation where amplification of electrical signals is employed.

Score (1) time (3 minute)

Concept : I.C chips

5. In modern computers nearly 170 crore transistors do their function. Even then the size and weight of the computers are much reduced. How is this made possible?

Score (1) time (3 minute)

Concept : Inductors, resistors

6. Inductors and resistors are two components used to regulate the electric current. What are the main differences in their function?

Score (2) time (4 minute)

Concept : Components in electronic devices

7. What do the following symbols indicate? Write one use of each of them.



Score (4) time (8 minute)

Concept : Capacitors

8. (a) Capacitors are known by different names. If so, what is meant by a paper capacitor? (1)
(b) What are the differences between an electrolytic capacitor and a paper capacitor? (1)
(c) What is the precaution to be taken when an electrolytic capacitor is connected to a circuit? (1)

Score (3) time (4 minute)

Concept : Light emitting diodes

9. A.C of frequency 50 Hz was passed through a diode. The electricity thus obtained was used to glow an LED.
(a) Is there any peculiarity in the light from the LED? (1)
(b) If the glowing LED is whirled speedily how will the circle of light appear to be? (1)
(c) Explain the reasons for the answers to (a) and (b) (2)

Score (4) time (6 minute)
