

NEET SEMICONDUCTOR ELECTRONICS — DIODE AS A RECTIFIER (HALF-WAVE AND FULL-WAVE) — PYQS

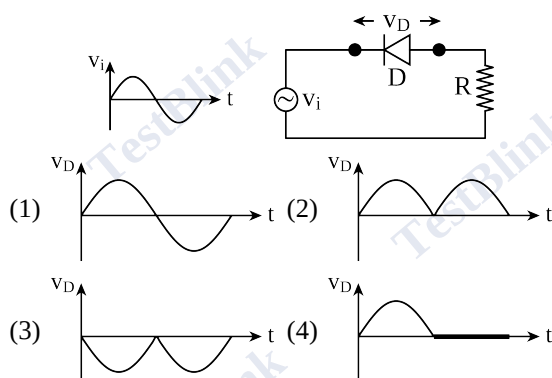
Max. Marks: 28

Questions: 7

Section A (MCQ) — 7 questions

- Q.1** In the circuit shown below, the voltage appearing across the diode D will be of the form :

[NEET (UG) 2026]

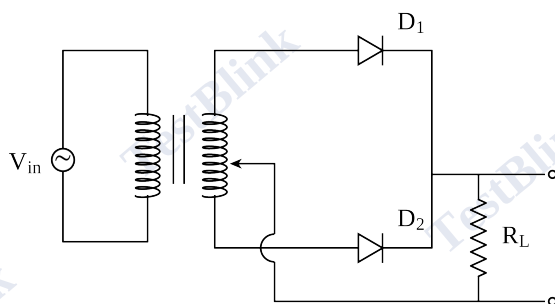


Scan or tap for the full solution



- Q.2** A full wave rectifier circuit with diodes (D_1) and (D_2) is shown in the figure. If input supply voltage $V_{in} = 220\sin(100\pi t)$ volt, then at $t = 15$ msec

[NEET (UG) 2025]



- (1) D_1 and D_2 both are forward biased
- (2) D_1 and D_2 both are reverse biased
- (3) D_1 is forward biased, D_2 is reverse biased
- (4) D_1 is reverse biased, D_2 is forward biased.

Scan or tap for the full solution



- Q.3** A full wave rectifier circuit consists of two p-n junction diodes, a centre-tapped transformer, capacitor and a load resistance. Which of these components removes the ac ripple from the rectified output?

[NEET (UG) 2023]

- (1) p-n junction diodes
- (2) Capacitor
- (3) Load resistance
- (4) A centre-tapped transformer

Scan or tap for the full solution



- Q.4** In half wave rectification, if the input frequency is 60 Hz, then the output frequency would be

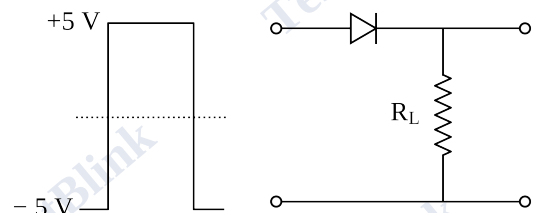
[NEET (UG) 2022]

- (1) Zero
- (2) 30 Hz
- (3) 60 Hz
- (4) 120 Hz

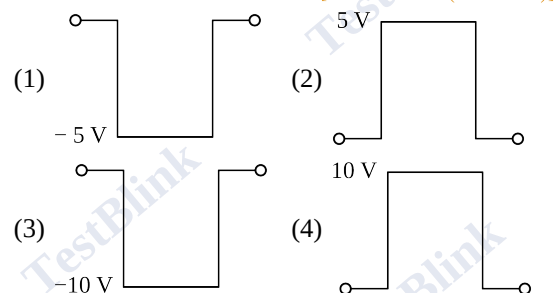
Scan or tap for the full solution



- Q.5** If in a p-n junction, a square input signal of 10 V is applied, as shown,

then the output across R_L will be

[AIPMT 2015 (Cancelled)]



Scan or tap for the full solution



- Q.6** The peak voltage in the output of a half wave diode rectifier fed with a sinusoidal signal without filter is 10 V. The d.c. component of the output voltage is

[AIPMT 2004]

- (1) $(10/\sqrt{2})$ V
- (2) $\left(\frac{10}{\pi}\right)$ V
- (3) 10 V
- (4) $(20/\pi)$ V

Scan or tap for the full solution



Q.7 If a full wave rectifier circuit is operating from 50 Hz mains, the fundamental frequency in the ripple will be [AIPMT 2003]

- (1) 25 Hz (2) 50 Hz (3) 70.7 Hz (4) 100 Hz

Scan or tap for the
full solution



ANSWER KEY

Ques.	1	2	3	4	5	6	7
Ans.	4	3, 4	2	3	2	2	4