

NEET SEMICONDUCTOR ELECTRONICS — P-N JUNCTION FORMATION — PYQS

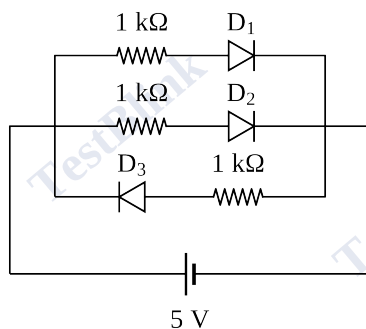
Max. Marks: 20
Questions: 5

Section A (MCQ) — 5 questions

- Q.1** Two statements are given below :
- A. When the forward bias voltage across a p-n junction diode increases above a certain threshold voltage, the diode current increases significantly.
- B. This current is called reverse saturation current.
- Choose the correct answer from the options given below : [NEET (UG) 2026]
- (1) Both Statements A and B are true
 - (2) Both Statements A and B are false
 - (3) Statement A is true, but Statement B is false
 - (4) Statement A is false, but Statement B is true

 Scan or tap for the
full solution


- Q.2** Three identical p-n junction diodes D_1 , D_2 , and D_3 are connected across a battery as shown in the figure. If the width of the depletion regions of D_1 , D_2 and D_3 are W_1 , W_2 and W_3 , respectively, then the correct option is: [RE-NEET (UG) 2026]



- (1) $W_2 > W_1 = W_3$
- (2) $W_1 > W_2 > W_3$
- (3) $W_3 = W_1 > W_2$
- (4) $W_3 > W_2 > W_1$

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- Q.3** The barrier potential of a p-n junction depends on Which one of the following is correct ?
- A. type of semiconductor material
- B. amount of doping
- C. temperature [AIPMT 2014]
- (1) A and B only
 - (2) B only
 - (3) B and C only
 - (4) A, B and C

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- Q.4** In an unbiased p-n junction, holes diffuse from the p-region to n-region because of

[NEET 2013 (Karnataka)]

- (1) The attraction of free electrons of n-region.
- (2) The higher hole concentration in p-region than that in n-region.
- (3) The higher concentration of electrons in the n-region than that in the p-region.
- (4) The potential difference across the p-n junction.

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- Q.5** Barrier potential of a p-n junction diode does not depend on [AIPMT 2003]

- (1) diode design
- (2) temperature
- (3) forward bias
- (4) doping density

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ANSWER KEY

Ques.	1	2	3	4	5						
Ans.	3	4	4	2	1						