

PYQSide

NEET CURRENT ELECTRICITY — TEMPERATURE DEPENDENCE OF RESISTIVITY — PYQS

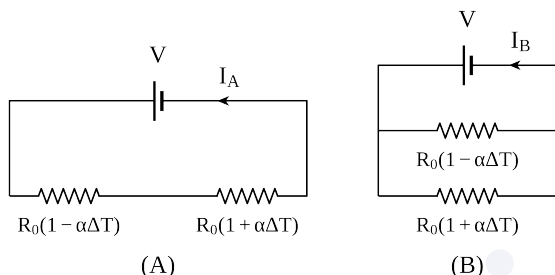
Max. Marks: 28

Questions: 7

Section A (MCQ)

- Q.1** Consider two circuits, (A) and (B), each having two resistors. One of them has a positive temperature coefficient of resistance, $+\alpha$, while the other one has a negative temperature of coefficient, $-\alpha$, as shown in the figure. The current through these circuits are denoted by I_A and I_B . At initial temperature, the resistance of the two resistors is R_0 . As the temperature is increased, the correct option that describes the variation of current in these circuits is:

[RE-NEET (UG) 2026]



- (1) both I_A and I_B remain constant
- (2) I_A remains constant while I_B increases
- (3) I_A decreases while I_B increases
- (4) I_A increases while I_B decreases

Scan or tap for the full solution



- Q.2** The resistance of platinum wire at 0°C is $2\ \Omega$ and $6.8\ \Omega$ at 80°C . The temperature coefficient of resistance of the wire is :

[NEET (UG) 2023]

- (1) $3 \times 10^{-3}\ ^\circ\text{C}^{-1}$
- (2) $3 \times 10^{-2}\ ^\circ\text{C}^{-1}$
- (3) $3 \times 10^{-10}\ ^\circ\text{C}^{-1}$
- (4) $3 \times 10^{-4}\ ^\circ\text{C}^{-1}$

Scan or tap for the full solution



- Q.3** As the temperature increases, the electrical resistance

[NEET (UG) 2022]

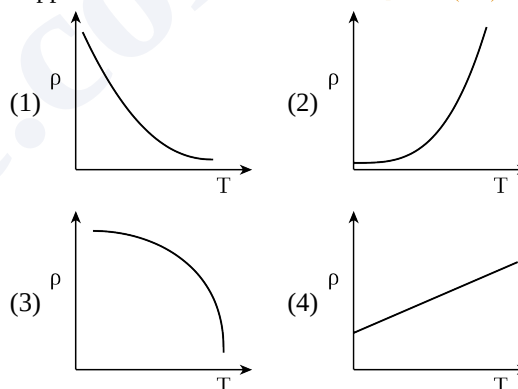
- (1) Increases for both conductors and semiconductors
- (2) Decreases for both conductors and semiconductors
- (3) Increases for conductors but decreases for semiconductors
- (4) Decreases for conductors but increases for semiconductors

Scan or tap for the full solution



- Q.4** Which of the following graph represents the variation of resistivity (ρ) with temperature (T) for copper?

[NEET (UG) 2020]



Scan or tap for the full solution



- Q.5** The solids which have the negative temperature coefficient of resistance are :

[NEET (UG) 2020]

- (1) insulators only
- (2) semiconductors only
- (3) insulators and semiconductors
- (4) metals

Scan or tap for the full solution



- Q.6** Specific resistance of a conductor increases with

[AIPMT 2002]

- (1) increase in temperature
- (2) increase in cross-section area
- (3) increase in cross-section and decrease in length
- (4) decrease in cross-section area.

Scan or tap for the full solution



- Q.7** Copper and silicon are cooled from 300 K to 60 K, the specific resistance [AIPMT 2001]
- (1) decrease in copper but increase in silicon
 - (2) increase in copper but decrease in silicon
 - (3) increase in both
 - (4) decrease in both

Scan or tap for the
full solution



ANSWER KEY

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