

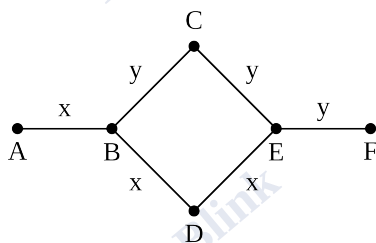
JEE MAIN THERMAL PROPERTIES OF MATTER — HEAT TRANSFER: CONDUCTION — PYQS

Max. Marks: 8
Questions: 2

Section A (MCQ) — 1 question

- Q.1** Rods x and y of equal dimensions but of different materials are joined as shown in figure. Temperatures of end points A and F are maintained at 100°C and 40°C respectively. Given the thermal conductivity of rod x is three times of that of rod y, the temperatures at junction points B and E are (close to):

[JEE Main 2026 (Online) 22nd January Morning Shift]



- (1) 60°C and 45°C respectively
- (2) 80°C and 70°C respectively
- (3) 89°C and 73°C respectively
- (4) 80°C and 60°C respectively

Scan or tap for the full solution



Section B (Numerical) — 1 question

- Q.2** Two cylindrical rods A and B made of different materials, are joined in a straight line. The ratios of lengths, radii and thermal conductivities of these rods are: $\frac{L_A}{L_B} = \frac{1}{2}$, $\frac{r_A}{r_B} = 2$ and $\frac{K_A}{K_B} = \frac{1}{2}$. The free ends of rods A and B are maintained at 400 K , 200 K , respectively. The temperature of rods interface is _____ K, when equilibrium is established.

[JEE Main 2025 (Online) 7th April Evening Shift]

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ANSWER KEY

Section A (MCQ) — 1 question

Ques.	1																		
Ans.	3																		

Section B (Numerical) — 1 question

Ques.	2																		
Ans.	360																		