

JEE MAIN THERMAL PROPERTIES OF MATTER — SPECIFIC HEAT CAPACITY AND CALORIMETRY — PYQS

Max. Marks: 12

Questions: 3

Section A (MCQ) — 3 questions

- Q.1** A gas based geyser heats water flowing at the rate of 5.0 litres per minute from 27°C to 87°C . The rate of consumption of the gas is _____ g/s.
(Take heat of combustion of gas = 5.0×10^4 J/g, specific heat capacity of water = $4200 \text{ J/kg}\cdot^{\circ}\text{C}$)

[JEE Main 2026 (Online) 21st January Morning Shift]

- (1) 4.2 (2) 2.1 (3) 0.21 (4) 0.42

Scan or tap for the
full solution



- Q.2** Water falls from a height of 200 m into a pool. Calculate the rise in temperature of the water assuming no heat dissipation from the water in the pool.
(Take $g = 10 \text{ m/s}^2$, specific heat of water = 4200 J/(kg K))

[JEE Main 2025 (Online) 8th April Evening Shift]

- (1) 0.36 K (2) 0.23 K (3) 0.48 K (4) 0.14 K

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full solution



- Q.3** Match **List - I** with **List - II**.

List - I		List - II	
A.	Heat capacity of body	I.	J kg^{-1}
B.	Specific heat capacity of body	II.	J K^{-1}
C.	Latent heat	III.	$\text{J kg}^{-1} \text{K}^{-1}$
D.	Thermal conductivity	IV.	$\text{J m}^{-1} \text{K}^{-1} \text{s}^{-1}$

Choose the correct answer from the options given below : [JEE Main 2025 (Online) 2nd April Evening Shift]

- (1) (A)-(IV), (B)-(III), (C)-(II), (D)-(I)
 (2) (A)-(III), (B)-(I), (C)-(II), (D)-(IV)
 (3) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)
 (4) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)

Scan or tap for the
full solution



ANSWER KEY

Ques.	1	2	3								
Ans.	4	3	4								