

# PYQSide

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

Max. Marks: 12

Questions: 3

### Section A (MCQ)

- 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 =  $5.0 \times 10^4$  J/g, specific heat capacity of water = 4200 J/kg·°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  $g = 10$  m/s<sup>2</sup>, 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

Scan or tap for the full solution



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

| List - I |                                | List - II |                                                   |
|----------|--------------------------------|-----------|---------------------------------------------------|
| A.       | Heat capacity of body          | I.        | J kg <sup>-1</sup>                                |
| B.       | Specific heat capacity of body | II.       | J K <sup>-1</sup>                                 |
| C.       | Latent heat                    | III.      | J kg <sup>-1</sup> K <sup>-1</sup>                |
| D.       | Thermal conductivity           | IV.       | J m <sup>-1</sup> K <sup>-1</sup> s <sup>-1</sup> |

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 |  |  |  |  |  |  |  |  |  |  |