



PHYSICS

BOOKS - SANTRA PHYSICS (BENGALI ENGLISH)

THERMAL PHENOMENA

Mcq

1. The volume of a liquid at $15^{\circ} C$ is $830m^3$ and at $90^{\circ} C$ it is $855m^3$. The coefficient of volume

expansion of the liquid is

A. $3 \times 10^{-3} / ^\circ C$

B. $2.5 \times 10^{-4} / ^\circ C$

C. $4 \times 10^{-4} / ^\circ C$

D. $5 \times 10^{-4} / ^\circ C$

Answer:



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2. A gas has volume 3 litre when the thermometer reads 300 K. If the thermometer stands at 400 K, the volume of the gas will be close to

A. 1 litre

B. 4 litre

C. $\frac{9}{4}$ litre

D. any value

Answer:



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3. At constant pressure the volumes of a given mass of gas at temperatures $27^{\circ}C$ and $54^{\circ}C$ are V_1 and V_2 respectively. The ratio $\frac{V_1}{V_2}$ is

A. $\frac{27}{54}$

B. $\frac{54}{27}$

C. $\sqrt{\frac{100}{109}}$

D. $\frac{100}{109}$

Answer:





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4. SI unit of the coefficient of thermal conductivity is

A. $Jm^{-1}K^{-1}$

B. $Wm^{-1}K^{-1}$

C. $cal\ m^{-1}\ ^\circ C^{-1}$

D. $cal\ s^{-1}\ cm^{-1}\ ^\circ C^{-1}$

Answer:



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Vsa

1. What is the unit of coefficient of expansion of solid in SI system ?



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2. What is the value of volume coefficient of expansion of a gas ?



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3. What is the CGS unit of coefficient of thermal conductivity ?



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Short Answer Type Questions

1. State Charles' law. What are the constants in this law ?



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2. Volume coefficient of a gas is $\frac{1}{273} / K'$ -

explain the statement.



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3. Define coefficient of thermal conductivity.

What is its SI unit ?



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