



## 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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