



## PHYSICS

### BOOKS - KUMAR PRAKASHAN KENDRA PHYSICS (GUJRATI ENGLISH)

### QUESTION ASKED IN NEET -2019

#### Multiple Choice Questions

1. When a block of mass  $M$  is suspended by a long wire of length  $L$ , the length of the wire becomes

$(L + l)$ . The elastic potential energy stored in the extended wire is:

A.  $\frac{1}{2}MgL$

B.  $Mgl$

C.  $MgL$

D.  $\frac{1}{2}Mgl$

**Answer: D**



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2. A soap bubble, having radius of 1mm, is blown from a detergent solution having a surface tension of  $2.5 \times 10^{-2} N/m$ . The pressure inside the bubble equals at a point  $Z_0$  below the free surface of water in a container. Taking  $g = 10 m/s^2$ , density of water  $= 10^3 kg/m^3$ , the value of  $Z_0$  is

- A. 0.5cm
- B. 100cm
- C. 10cm
- D. 1cm

**Answer: D**

3. A small hole of area of cross-section  $2\text{mm}^2$  is present near of the bottom of a fully filled open tank of height 2m. Taking  $g = 10\text{m/s}^2$ , the rate of flow of water through the open hole would be nearly:

A.  $6.4 \times 10^{-6}\text{m}^3/\text{s}$

B.  $12.6 \times 10^{-6}\text{m}^3/\text{s}$

C.  $8.9 \times 10^{-6}\text{m}^3/\text{s}$

D.  $2.23 \times 10^{-6}\text{m}^3/\text{s}$

**Answer: B**



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4. A copper rod of 88cm and an aluminium rod of unknown length have their increase in length independent of increase in temperature. The length of aluminium rod is:

$$(\alpha_{Cu} = 1.7 \times 10^{-5} K^{-1} \text{ and } \alpha_{Al} = 2.2 \times 10^{-5} K^{-1})$$

- A. 68cm
- B. 6.8cm
- C. 113.9cm

D. 88cm

**Answer: A**



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**5. The unit of thermal conductivity is:**

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

B.  $JmK^{-1}$

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

D.  $WmK^{-1}$

**Answer: A**



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6. In which of the following processes, heat is neither absorbed nor released by a system?

A. isochoric

B. isothermal

C. adiabatic

D. isobaric

**Answer: C**

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7. Increase in temperature of a gas filled in a container would lead to:

A. decrease in intermolecular distance

B. increase in its mass

C. increase in its kinetic energy

D. decrease in its pressure

**Answer: C**

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8. Average velocity of a particle executing SHM in one complete vibration is

A. zero

B.  $\frac{A\omega}{2}$

C.  $A\omega$

D.  $\frac{A\omega^2}{2}$

**Answer: A**



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9. The displacement of a particle executing simple harmonic motion is given by  $y = A_0 + A \sin \omega t + B \cos \omega t$ . Then the amplitude of its oscillation is given by:

A.  $A + B$

B.  $A_0 + \sqrt{A^2 + B^2}$

C.  $\sqrt{A^2 + B^2}$

D.  $\sqrt{A_0^2 + (A + B)^2}$

**Answer: B**



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