## ICSE – 10TH TERM – 1 – MOCK TEST -1 (PHYSICS)

**Topic : Turning effect of force, circular motion, machines, work, power & Energy**

**Time : 50 Minutes**                                                                                          **M.M.: 40**

### ALL QUESTIONS ARE COMPULSORY

**The intended marks for questions or parts of questions are given in brackets [ ].**

**Question 1**
(a)     A body is acted upon by two unequal forces in opposite directions, but not in
        same line. The effect is that                                                                         [1]
        (1) The body will have only the rotational motion
        (2) The body will have only the translational motion
        (3) The body will have neither the rotational motion nor the translational motion
        (4) The body will have rotational as well as translational motion.

(b)     A body, when acted upon by a force of 10 kgf gets displaced by 0.5 m. Calculate
        the work done by the force, when the displacement is normal to the force.  [1]
        ($g= 10Nkg^{-1}$)
        (1) 100 J                (2) 50 J                (3) 0 J                (4) 20 J

(c)     Mechanical advantage (M.A.), load (L) and effort (E) are related as:              [1]
        (1) M.A. = L x E       (2) M.A. x E = L        (3) E = M.A. x L        (4) None of these
(d)     State the incorrect statement:                                                                   [1]
        (1) A machine always has the efficiency less than 100%.
        (2) The mechanical advantage of a machine can be less than 1.
        (3) A machine can be used as speed multiplier.
        (4) A machine can have the mechanical advantage greater than the velocity ratio.

(e)     In the given combination of three movable pulleys and one fixed pulley to lift up
        a load                                                                                               [2]
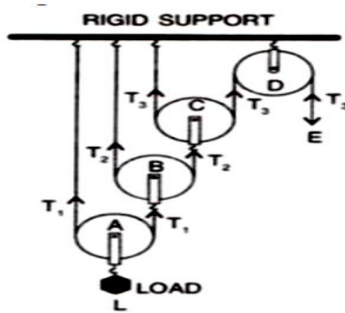
(I)     find velocity ratio in ideal situation.
        (1) 4                   (2) 10                  (3) 8                   (4) None of these
(II)    The above given combination of three movable pulleys and one fixed pulley to
        lift up a load acts as
        (1) force multiplier only
        (2) direction manipulator only
        (3) both force multiplier and direction manipulator
        (4) None of these

(f)     A uniform metre rule of mass 100 g is balanced on a fulcrum at mark 40 cm by
        suspending an unknown mass m at the mark 20 cm.                                  [4]
        (I)     The value of m is
                (1) 40 g        (2) 50 g        (3) 80 g        (4) None of these

        (II)    To which side the rule will tilt if the mass m is moved to the mark 10 cm
                (1) Towards the side of mass m
                (2) Towards the side opposite to mass m
                (3) Rule will be balanced
                (4) Data is insufficient
        (III)   The resultant moment when mass m is shifted to mark 10 cm is
                (1) 1500 g cm                   (2) 1150 g cm
                (3) 1080 g cm                   (4) None of these
        (IV)    Instead of mass m, where should a 50 g mass be attached to balance the
                rule
                (1) At 40 cm mark              (2) At 20 cm mark
                (3) At 30 cm mark              (4) At 50 cm mark

**Question 2**
(a)     weight lifter lifted a load of 200 kgf to a height of 2.5 m in 5 s ,the power
        developed by him. Take g =10N/kg⁻¹.                                             [1]
        (1) 500 W               (2) 1500 W              (3) 1000 W              (4) 1200 W

(b)     The centre of gravity of a hollow cone of height h is at distance x from its vertex
        where the value of x is:                                                        [1]
        (1) h/3                 (2) h/4                 (3) 2h/3                (4) 3h/4

(c)     A body of mass 60 kg has the momentum 3000 kgm/s⁻¹. Calculate: (i) the kinetic
        energy and the kinetic energy and the speed of the body is                      [1]

(1) 75000 J and 40 m/s           (2) 75000 J and 50 m/s
(3) 85000 J and 20 m/s           (4) None of the above

(d)    The centrifugal force is:                                              [1]
        (1) a real force
        (2) the force of reaction of centripetal force
        (3) a fictitious force
        (4) directed towards the centre of circular path

(e)    A block and tackle system has 5 pulleys. If an effort of 1000 N is needed in the downward direction to raise a load of 4500 N, calculate:             [2]
        (I)     The mechanical advantage is
              (1) 3        (2) 4        (3) 5        (4) 4.5
        (II)    The efficiency of the system.
              (1) 1        (2) 0.8      (3) 0.9      (4) None of the above

(f)    A girl at rest at gate of her society which is 3.2 m above the road comes down the slope AB on a cycle without paddling. [g = 10 N/kg] [4]
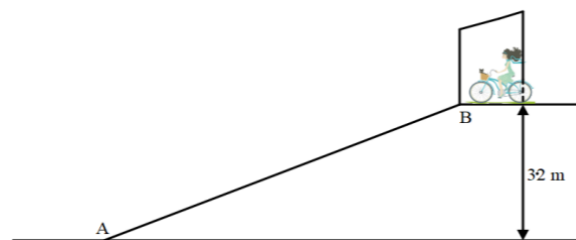


        (I)     The mechanical energy possessed by the girl at B is
              (1) Vibrational kinetic energy.
              (2) Translational kinetic energy
              (3) Elastic potential energy.
              (4) Gravitational potential energy.

        (II)    The velocity with which girl reaches point A is
              (1) 32 m/s             (2) 10 m/s
              (3) 8 m/s               (4) Insufficient information to calculate velocity.

        (III)   If the mass of the girl is 40 kg then the kinetic energy of the girl at A is [Assuming no loss of energy.]
              (1) 1280 J        (2) 1600 J        (3) 400 J        (4) 3200J

        (IV)   The potential energy of the girl (of mass 40 kg) when she reaches the midpoint of the slope of AB
              (1) 800 J         (2) 200 J        (3) 1600 J       (4) 640 J

**Question 3**

(a)     Which of the following quantity remains constant in uniform circular motion: [1]
(1) Velocity                                     (2) Speed
(3) Acceleration                                 (4) Both velocity and speed

(b)     In an electric cell while in use, the change in energy is from:          [1]
(1) Electrical to mechanical                     (2) Electrical to chemical
(3) Chemical to mechanical                       (4) Chemical to electrical

(c)     Which of the following statements is false                              [1]
(1) The velocity ratio of a single fixed pulley is always more than 1
(2) The velocity ratio of a single movable pulley is always $2^n$
(3) The velocity ratio of a combination of n movable pulleys with a fixed pulley is always 2
(4) The velocity ratio of a block and tackle system is always equal to the number of strands of the tackle supporting the load.

(d)     A nut is opened by a wrench of length 10cm. If the least force required is 5.0N, the moment of force needed to turn the nut.                                  [1]
(1) 0.5 Nm              (2) 5 Nm                (3) 0.6 Nm    (4) None of the above

(e)     A uniform metre rule balances horizontally on a knife edge placed at the 58 cm mark when a weight of 20 gf is suspended from one end. The weight of the rule is                                                                          [2]
(1) 105 gf             (2) 500 gf              (3) 150 gf     (4) None of the above

(f)     The diagram given below shows a ski jump platform .A skier weighing 60kgf stands at A at the top of ski jump. He moves from A and takes off for his jump at B.                                                                              [4]



(I)     The change in the gravitational potential energy of the skier between A and B
(1) 25000 J    (2) 36000 J    (3) 48000 J    (4) None of the above

(II)    If 75% of the energy in part (I) becomes the kinetic energy at B, the speed at which the skier arrives at B.
(Take g = 10 m s$^{-2}$).
(1) 30 m/s    (2) 40 m/s    (3) 10 m/s    (4) None of the above

**Question 4**

(a)   The moment of a force about a given axis depends:                                    [1]
      (1) Only on the magnitude of force
      (2) Only on the perpendicular distance of force from the axis
      (3) Neither on the force nor on the perpendicular distance of force from the axis
      (4) Both on the force and its perpendicular distance from the axis.

(b)   A spring is kept compressed by a small trolley of mass 0.5 kg lying on a smooth
      horizontal surface as shown. When the trolley is released, it is found to move at a
      speed of $v = 2$ m/s$^{-1}$.                                                          [1]
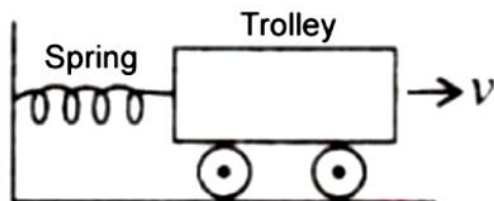


      (1) 2 J          (2) 1 J          (3) 3 J          (4) None of the above

(c)   A single fixed pulley is used because it:                                            [2]
      (1) Has a mechanical advantage greater than 1
      (2) Has a velocity ratio less than 1
      (3) Gives 100% efficiency
      (4) Helps to apply the effort in a convenient direction.

(d)   A boy takes 3 minutes to lift a 20 litre water bucket from a 20 m deep well, while
      his father does it in 2 minutes , ratio of power developed by them is .Take
      density of water $= 10^3$ kg m$^{-3}$ and $g = 9.8$ N kg$^{-1}$.                      [2]
      (1) 2 : 3          (2) 4 : 3          (3) 3 : 4          (4) None of the above

(e)   In figure 1.35 below, a uniform bar of length $l$ m is supported at its ends and
      loaded by a weight $W$ kgf at its middle. The system is in equilibrium and $R_1$ and
      $R_2$ are normal reactions at the ends.                                              [4]



      (I) In the above figure
      (1) R1 < R2              (2) R1 > R2              (3) R1 = R2              (4) Data insufficient

      (II) Value of R1 is
      (1) W                    (2) 2W                  (3) W/2                 (4) Data insufficient

**PHYSICS- 10ᵀᴴ Icse - TERM 1 Mock 2**
**Topic : light and sound**

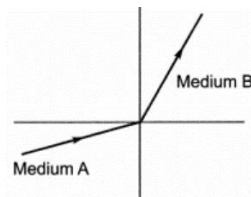Time : 50 Minutes                                                                          M.M.: 40

**Question 1**

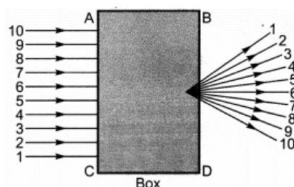(a)     In the given figure, the refractive index of medium B with respect to medium A
        is                                                                                       (1)



        1.     greater than unity
        2.     less than unity
        3.      equal to unity
        4.     zero

(b)     A beam of light is incident through the holes on side A and emerges out of the
        holes on the other face of the box as show in the figure. Which of the following
        could be inside the box?                                                              (1)



        1. Concave lens                                    2. Rectangular glass slab
        3.  Prism                                          4. Convex lens

(c).    **Two thin lenses, one of focal length +60 cm and the other of focal length -20**
**cm     are kept in contact. Their combined focal length is**                                (1)
        1. -30 cm              2. +30 cm              3. -15 cm              4. +30 cm

(d).    **A hole is made in a convex lens .Then ,**                                            (1)
        1. A hole appears in the image              2. Image size decreases
        3. Image intensity decreases                4. No change

(e)     The diagram alongside shows the refraction of a ray of light from air to liquid.
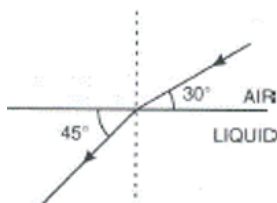


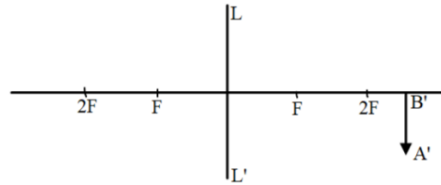        (i)     The values of angle of incidence is                                           (1)

1.30°         2.60°         3.90°         4.20°

(ii)    The refractive index of liquid with respect to air is                    (1)

1. $\frac{\sqrt{2}}{\sqrt{3}}$         2. $1/2$         3. $\sqrt{3}/\sqrt{2}$         4. 1

(f)    The diagram below shows an image formed at a distance 36 cm from the lens LL′
       of focal length 12 cm. With respect to this answer the questions that follow. [4]



(i)    The position of the object on the left-hand side should be
       1. between 12 cm to 30 cm from the lens.
       2. beyond 24 cm from the lens.
       3. between 12 cm to 24 cm from the lens.
       4. within 12 cm from the lens.

(ii)   Power of this lens is
       1. - 8.33 D     2. + 8.4 D     3. + 8.33 D     4. – 8.4 D

(iii)  The object distance with sign convention is
       1. - 18 cm     2. - 15 cm     3. - 9 cm     4. + 18 cm

(iv)   If the lens LL′ is replaced by another lens of same type but focal length 15
       cm then for the same object distance
       1. the size of the image decreases.
       2. the size of the image increases.
       3. the size of the image remains the same.
       4. information is insufficient to conclude

## Question 2
(a)    Refractive index of a material for infrared light is :                    (1)
       1. Equal to that for red colour of light
       2. Equal to that for ultraviolet light
       3. Less than that for ultraviolet light
       4. Greater than that for ultraviolet light

(b)    Which of the following statements is/are true?                    (1)
       1. A convex lens has 4 dioptre power having a focal length 0.25 m
       2. A convex lens has -4 dioptre power having a focal length 0.25 m
       3. A concave lens has 4 dioptre power having a focal length 0.25 m
       4. A concave lens has – 4 dioptre having a focal 0.25 m

(c)     Beams of light are incident through the holes A and B and emerge out of box through the holes C and D respectively as shown in the figure. Which of the following could be inside the box?                                          (1)



Box
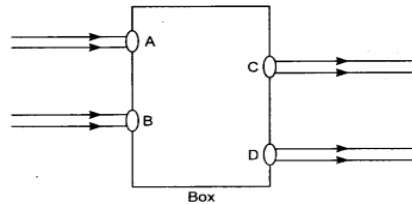
1. A rectangular glass slab                    2. A convex lens.
3. concave lens                                4. A prism

**(d)     The coloured light that has highest angle of refraction while passing through a prism is :                                                              (1)**
1. yellow       2. Violet        3. Blue          4. Red

(e)     An illuminated object lies at a distance 1.0 m from a screen. A convex lens is used to form the image of object on a screen placed at distance 75 cm from the lens.
        (i)      the focal length of lens is                                      (1)
                 1.20.25 cm    2.18.30 cm     3.20 cm         4.18.75 cm

        (ii)     the magnification of lens is                                     (1)
                 1. +3            2. -3            3. +1.5          4. -1

(f)     A person standing at a distance x in front of a cliff fires a gun. Another person B standing behind the person A at a distance y from the cliff hears two sounds of the fired shots after 2s and 3s respectively.(take speed of sound 320m/s)
        **(i)      In above problem value of x is                                 (2)**
                 1.260 m         2.100 m        3.160 m        4.180 m

        **(ii)     In the above problem value of y is                            (2)**
                 1. 160 m        2. 800 m       3. 650 m       4. 120 m

**Question 3**
**(a)     When an object moves towards a convex lens the size of image _____.    (1)**
        1. Decreases                          2. Increases
        3. First decreases then increases    4. Remains the same

(b)     A prism ABC (with BC as base) is placed in different orientations. A narrow       beam of white light is incident on the prism as shown in the Figures given below.         In which of the following cases, after dispersion, the third colour from the top  corresponds to the colour of the sky?                                          (1)
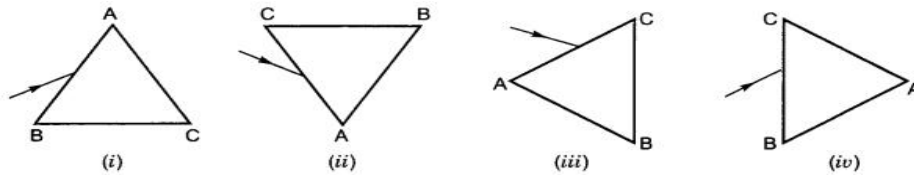
1. (i)          2. (ii)          3. (iii)          4. (iv)

(c)     If the magnification produced by a lens is – 0.5, the correct statement is :     (1)
1. The lens is concave
2. The image is virtual
3. The image is magnified
4. The images is real and diminished formed by a convex

(d)     The maximum magnifying power of a convex lens of focal length 2.5 cm can be:
(1)
1. 21               2. 10               3. 11               4. 6

(e)     A candle of length 3 cm be placed in front of a convex lens so that its image of
length 6 cm be obtained on a screen placed at distance 30 cm behind the lens.
(i)     At what distance from the lens the object placed                          (1)
1. 20 cm       2. 30 cm       3. 40 cm       4. 10 cm

(ii)    The focal length of lens is                                               (1)
1. 20 cm       2. 30 cm       3. 40 cm       4. 10 cm

(f)     The diagram shows the path of light through a right-angled prism of critical
angle 42°. Observe the diagram and answer the questions that follow.     (4)
(i)     The phenomenon at the surface AC is
1. Refraction                          2. Partial reflection
3. Total internal reflection           4. Scattering.

(ii)    The angle of incidence at the surface AC is
1. 30°          2. 45°          3. 0°          4. 60°          5. 90°

(iii)   The angle of incidence at the surface AB is
1. 30°          2. 0°          3. 45°          4. 60°          5. 90°

(iv)    Which of the following statement is wrong?
1. Speed of light ray PQ is equal to the speed of light ray ST.
2. Speed of light ray QR is equal to the speed of light ray RS.
3. Speed of light ray PQ is greater than the speed of light ray RS.
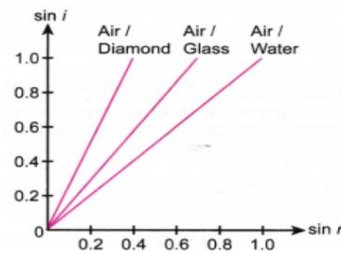4. Speed of light ray RQ is greater than the speed of light ray ST.

**Question 4**
(a)     A ray of light of wavelength 5400 Å suffers refraction from air to glass.
Taking = $_a\mu_g$ = 3/2, the wavelength of light in glass is                 (1)

1. 2100 A°          2. 3100 A°          3. 3600 A°          4. 4800 A°

(b)     Observe the given graph and find the correct statement           (1)



1.       The optical density of diamond is less that that of glass
2.       Speed of light is faster in water than glass
3.       Speed of light in water is slower than that of diamond
4.       Refractive index of diamond is least amongst three

(c)     A ray of light suffers refraction through an equilateral prism. The deviation produced by the prism does not depend on the:          (1)
1.       Angle of incidence
2.       Colour of light
3.       Material of prism
4.       Size of prism

(d)     The angle of incidence for a ray of light which suffers a minimum deviation of 36º through an equilateral prism is          (1)
1.       48°
2.       36°
3.       42°
4.       50°

(e)     An object in a denser medium when viewed from a rarer medium appears to be raised. The shift is maximum for:          (2)
1. Red light          2. Violet light          3. Yellow light       4. Green light

(f).     A coin is placed at the bottom of a beaker containing water (refractive index = 4/3) to a depth of 12 cm

(i)       The apparent depth at which coin appears is          (2)
         1. 9 cm       2. 8 cm       3. 7 cm       4. 6 cm

(ii)      The coin appears raised by          (2)
1.       2 cm
2.       1 cm
3.       3 cm
4.       4 cm

**Time : 50 Minutes**                                                                                    **M.M.: 40**

Question 1

(a)     The ratio of sine of angle of incidence to the sine of angle of refraction equals
        refractive index is called                                                                    [1]
        1. Newton's law                          2. Snell's law
        3. Bernoulli's principle                 4. Archimedes' principle

(b)     The critical angle for glass-air is 45° for the light of yellow colour, the critical
        angle will be _____ for the light of blue colour.                                       [1]
        1. less than 45°                         2. more than 45°
        3. equal to 45°                          4. any angle more or less than 45°

(c)     What causes the twinkling of stars at night?                                                  [1]
        1. The fact that the stars do not emit light
        2. Frequent absorption of star light by their own atmosphere.
        3. The refractive index fluctuations in the earth's atmosphere.
        4. Frequent absorption of star light by the earth's atmosphere.

(d)     A doctor has prescribed a corrective lens of power +0.5 D to one of his patients.
        The nature of the lens is                                                                      [1]
        1. converging                            2. diverging
        3. converging as well as diverging       4. None of the above

(e)     Two waves A and B have wavelength 0.01 A° and 9000 A° respectively. Compare
        the speed of these waves when they travel in vacuum.                                          [2]
        1. 1:3          2. 1:2          3. 1:1          4. 3:1          5. 2:1

(f)     Refer the ray diagram given below and answer the questions i) to iv) based on it.
        'L' represents the lens. AB is the object.                                                    [4]
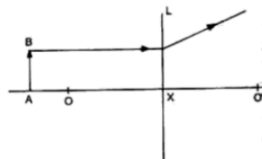


        i.      What is the nature of lens?
                1. Concave                       2. Convex
                3. Insufficient data given       4. Equiconvex
        ii.     What does the points O and O' represent in the ray diagram?
                1. First focus and second focus respectively
                2. Second focus and first focus respectively
                3. Radius of curvature and focal point respectively
                4. Focal point and radius of curvature respectively

iii.     The image formed by the lens will be
         1. Erect, virtual, diminished
         2. inverted, real, magnified
         3. Erect, virtual, magnified
         4. Inverted, real, diminished
iv.      The magnification of image formed will be
         1. Positive          2. Negative          3. Insufficient data
         4. Positive or negative depending upon the object distance

Question 2

(a)    A force of 5 N acts on a body of mass 3 kg producing a displacement of 10 m.
       The work done by the force is                                                    [1]
       1. 18 J                2. 30 J                3. 50 J                4. 36 J

(b)    When a ball is thrown vertically upwards its velocity keeps on decreasing.
       What happens to its kinetic energy when it reaches the maximum height?  [1]
       1. Kinetic energy is maximum at maximum height
       2. Kinetic energy is half the initial value
       3. Kinetic energy is zero
       4. Kinetic energy is double

(c)    The series of energy inter-conversions in a steam engine is                      [1]
       1. Chemical energy → Heat energy → Potential Energy
       2. Chemical energy → Heat energy
       3. Chemical energy → Heat energy → Kinetic Energy
       4. Chemical energy → Kinetic Energy

(d)    Two thin lenses of power +3.5 D and -2.5 D are placed in contact. Find the focal
       length of the lens combination.                                                 [2]
       1. 100 cm      2. 1 cm        3. 16.7 m      4. -16.7 m      5. -100 cm

(e)    A body of mass 4 kg has a momentum of 20 kg m/s, its K.E. is                    [2]
       1. 25 J        2. 50 J        3. 70 J        4. 100 J       5. 120 J       6. 200 J

(f)    A pendulum with bob of mass m is oscillating on either side from its resting
       position A between the extremes B and C at a vertical height h above A.    [4]
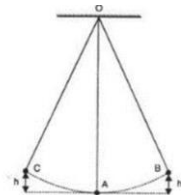


       Answer the questions i. to iv. based on the above diagram.
       i.      The potential energy and kinetic energy of bob at point A is
               1. mgh, 0 respectively              2. 0, mgh respectively

3. mgh, -mgh respectively         4. 0,0 respectively

ii.     At position B, potential energy _____ and kinetic energy _____.
1. Decreases, increases         2. Increases, decreases
3. Remain same, remain same    4. None of these

iii.    The energy possessed by the bob at extreme position is
          1. Kinetic energy
          2. Both kinetic energy as well as potential energy
          3. Potential energy
          4. None of these

iv.    The energy possessed by the bob between the extreme and mean positions is
          1. Kinetic energy
          2. Both kinetic energy as well as potential energy
          3. Potential energy
          4. None of these

Question 3

(a)    Mechanical advantage (M.A), load (L) and effort (E) are related as     [1]
1. M.A = L x E     2. E = M.A x L     3. M.A x E = L     4. None of these

(b)    The mechanical advantage for a block and tackle system consisting of 3 pulleys with a load of 3000 N and effort of 1500 N is approximately equal to_____ [2]
1. 6       2. 1       3. 0       4. 2       5. 3

(c)    State the incorrect statement:                 [1]
1. A machine always has the efficiency less than 100%.
2. The mechanical advantage of a machine can be less than 1.
3. A machine can be used as speed multiplier.
4. A machine can have the mechanical advantage greater than the velocity ratio.

(d)    In the uniform linear motion, the velocity is constant and acceleration is   [1]
1. zero         2. variable        3. constant        4. negative

(e)    The minimum distance between the source and the reflector in air, so that an echo is heard is approximately equal to            [2]
1. 10 m     2. 17 m     3. 34 m     4. 50 m     5. 60 m

(f)    The sound heard after reflection from a rigid obstacle (such as cliff, a hillside, a wall of a building, edge of a forest etc.), is called an echo. Reflected sound should reach the person at least 0.1 second after the original sound is heard.    [4]

    I.    A girl claps and hears the echo after reflection from a cliff which is 660 m away. If the velocity of sound is 330 ms-1, the time taken for hearing the echo is _____.

1. 1 s      2. 2 s      3. 0.1 s      4. 4 s      5. 6 s

II.      A boy fires a gun and hears the echo 2 seconds later. If he is 480 m away from a wall, calculate the velocity of sound in air.
1. 340 m/s     2. 480 m/s     3. 550 m/s     4. 1500 m/s   5. 980 m/s

Question 4

(a)      The lens of power + 1.0 D is                        [1]
1. convex of focal length 1.0 cm        2. convex of focal length 1.0 m
3. concave of focal length 1.0 cm      4. concave of focal length 1.0 m

(b)      Which would have greater impact; a ball with mass m thrown with speed 20 m/s or a ball with mass m/2 thrown at speed 40 m/s?              [1]
1. Ball with mass m
2. Ball with mass m/2
3. Both have the same kinetic energy
4. Depends on the surface on which the balls are thrown

(c)      A water pond appears to be 2.7 m deep. If the refractive index of water is 4/3, find the actual depth of the pond.             [2]
1. 2.025 m      2. 1.56 m      3. 5.7 m      4. 3.6 m      5. 4.756 m

(d)      A light ray of yellow colour is incident on an equilateral glass prism at an angle of incidence equal to 48° and suffers minimum deviation by an angle of 36°. [4]
     i.      What will be the angle of emergence?
         1. 45°      2. 90°      3. 48°      4. 60°

     ii.      If the angle of incidence is changed to 30° the angle of deviation will be
         1. equal to 36°           2. less than 36°
         3. more than 36°         4. Insufficient data

     iii.      If the angle of incidence is changed to 60°, state whether the angle of deviation will be equal to less than or more than 36°.
         1. equal to 36°           2. less than 36°
         3. more than 36°         4. Insufficient data

     iv.      The component of the white light which is deviated the most by prism is
         1. Yellow light      2. Blue light      3. Violet light      4. Red light

# ANSWER KEYS

## MOCK TEST 1

QUESTION 1

(a) -4        (b)-3        (c)-2        (d)-4

(e) (I)-3      (e) (II)-3     (f) (I)-2      (f) (II)-1

(f) (III)-1     (f) (IV)-4


QUESTION 2

(a)-3         (b)-3        (c)-2        (d)-3

(e) (I)-4      (e) (II)-3     (f) (I)-4      (f) (II)-3

(f) (III)-1     (f) (IV)-4


QUESTION 3

(a)-2         (b)-4        (c)-1        (d)-1

(e) -1       (f) (I)-2      (f) (II)-1


QUESTION 4

(a)-4         (b)-1        (c)-4        (d)-1

(e)-3        (f) -3


## MOCK TEST 2

| Question - 1 | a-1 | b-4 | c-1 | d-3 | e i-2, ii-3 | f i-3, ii-3, iii-1, iv-2 |
|---|---|---|---|---|---|---|
| Question - 2 | a- 3 | b- 1 | c- 1 | d- 4 | e i-4, ii-2 | f i-3, ii-2 |
| Question - 3 | a-1 | b- 2 | c- 4 | d- 1 | e – i-15cm, ii-4 | f i-3, ii-4, iii-1, iv-4 |
| Question - 4 | a-3 | b-2 | c-4 | d-1 | e-2 | f-i-1, ii-3 |


## MOCK TEST 3

| Question - 1 | a-2 | b- 1 | c-3 | d-1 | e-3 | f i-1, ii-2, iii-1, iv 1 |
|---|---|---|---|---|---|---|
| Question - 2 | a- 3 | b- 3 | c- 3 | d- 1 | e-2 | f i-2, ii-3, iii-3, iv-2 |
| Question - 3 | a-3 | b-4 | c-4 | d-1 | e-2 | f i-4 ii-2 |
| Question - 4 | a-1 | b-2 | c-4 | d- i-3, ii-3, iii-3, iv- 3 | | |