

WORKSHEET

I. DEFINE THE FOLLOWING.

- a. Area
- b. Volume
- c. Density

II. WRITE THE UNITS (S.I, C.G.S AND OTHER UNITS) OF THE FOLLOWING PHYSICAL QUANTITIES.

1. Area
2. Volume
3. Mass
4. Density
5. Speed
6. Energy
7. Work done

III. CONVERT THE FOLLOWING

1. m^2 to cm^2
2. cm^2 to m^2
3. m^3 to cm^3
4. cm^3 to m^3
5. kg/m^3 to g/cm^3
6. g/cm^3 to kg/m^3
7. km/hr to m/s
8. m/s to km/hr

IV. WRITE THE FORMULA FOR THE FOLLOWING

1. Volume of cube
2. Volume of cuboid
3. Volume of cylinder
4. Volume of sphere
5. Volume of cone
6. Area of square
7. Area of rectangle
8. Area of triangle
9. Area of trapezoid
10. Area of parallelogram
11. Area of circle
12. Potential energy
13. Kinetic energy
14. Work done
15. Density
16. Speed

V. DIFFERENTIATE BETWEEN

1. scalar and vector quantities
2. uniform and non-uniform motion
3. mass and weight

4. regular reflection and irregular reflection with diagram.
5. Conventional and non-conventional sources of energy.
6. Potential energy and kinetic energy
7. Rest and motion
8. Primary colours, secondary colours and complementary colours.

VI. SHORT ANSWERS

1. What are the conditions for “Work Done”
2. What is the relation between work and energy.
3. What are the key factors that make mirror different from other objects.
4. State the laws of reflection.
5. what are the characteristics of image formed by plane mirror.
6. Mention any 4 methods for energy conservation.
7. What is the speed of light in (a) Air (b) Water (c) Glass

VII. LONG ANSWERS:

1. Explain the type of meniscus that occurs while measuring the volume of liquid.
2. Explain the statement “equal volume of different substance has different mass”
3. Explain the statement “equal mass of different substances has different volume”
4. Explain how rest and motion are relative.
5. Explain all the types of motion with examples.
6. Explain the stored form of energy
7. Explain the energy in action.
8. Define reflection and terms related to reflection with neat diagram.

VIII. IDENTIFY THE TYPE OF MOTION OCCURRING IN THE FOLLOWING

1. Movement of snooker ball
2. Free falling fruit from a tree branch
3. Revolution of earth around the sun in elliptical orbit
4. Rotation of cycle wheel while pedalling
5. Swinging a hand fan
6. Motion of prongs in tuning fork
7. Movements of moon around the earth
8. Vibration of bobblehead
9. A drilling machines
10. Movement of wheels of car
11. Waves in the water bodies
12. Motion of strings of musical instrument
13. Back and forth movement of a batsman
14. Heart beats of normal person
15. Swinging of the tree when heavy wind hits the tree

IX. DIAGRAM BASED QUESTIONS:

1. Draw the ray diagram for the formation of image by point object.
2. Draw the ray diagram for formation of image by extended object.
3. Draw the ray diagram to show the lateral inversion of letter P.
4. Draw the ray diagram to show regular and irregular reflection.

X. COMPLETE THE TABULAR COLUMN:

	Magenta T shirt	Cyan rose	Yellow frock
Colours Absorbed			
Colours Reflected			
Appearance of the object in white light			
Appearance of the object in blue light			
Appearance of the object in green light			
Appearance of the object in red light			

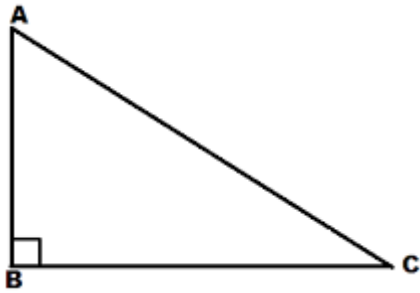
XI. IDENTIFY THE ENERGY TRANSFORMATION IN THE FOLLOWING

1. Photosynthesis
2. Mixers and grinders
3. Room heaters and geysers
4. Bulbs and tube lights
5. Lighted candle
6. Automobile engine
7. Microphone
8. Loudspeakers
9. Electromagnet
10. Charging a battery
11. Using a battery.

XII. NUMERICAL

1. The angle between the surface of the mirror and the incidence ray is 40° . Find the angle of reflection.
2. An object of mass 5kg is kept at height 2m from the surface of the earth. Find the energy possessed by the body.
3. At what height a body of mass 10 kg will be placed so as to gain the energy of 400 J.
4. What should be the mass of the body if it possesses an energy of 500 J kept at height 5 m.
5. An object of mass 20 kg is moving with velocity 10 m/s. find the energy possessed by the body.
6. An object of mass 40 kg moving with velocity 'v' possess 400 J of energy. Find the velocity with which it moves
7. What will be the mass of an object with energy 500 J and moving with velocity 10 m/s.
8. A force of 60 N displaces an object through 40 m. find the work done.
9. The work done to displace an object through 30 m is 300 J. find the mass of the object.
10. 1000 J of work is done to displace an object of mass 100 kg through x meter. Find 'x'
11. A car moves a distance of 300 k in 3 hrs. find the speed with which it moves.
12. A train moves at a uniform speed of 300 km/hr. How long will it take to cover 3000 km.

13. A car moves at a uniform speed of 250 km/hr. How long will it cover in 5 hrs.
14. An object moves 8 km from point A to point B and then 6 km from point B to point C. find the distance covered by the object and the displacement.



15. Lakshman moves along the perimeter of a square field. He takes 5 rounds and returns to his starting point A. find the distance covered by him and his displacement.
16. An object has mass 80 kg and occupies a space of 5m^3 find the density of the object.
17. An object of mass 40 kg has density 10kg/m^3 . Find the space occupied by it.
18. An object of density 2kg/m^3 , occupies a space of 6m^3 . Find the mass of the object.
19. An object of mass 5g displaces 20 ml of water when it was dipped in water. Find the density of the object.

XIII. CONVERT THE FOLLOWING:

1. 20 km/hr to m/s
2. 36 m/s to km/hr
3. 4g/cm^3 to kg/m^3
4. 4000kg/m^3 to g/cm^3
5. 10m^2 to cm^2
6. 40m^3 to cm^3

XIV. CHOOSE THE CORRECT ANSWER

1. This definition 'amount of space that an object occupies' is correct for which of the following terms?
 - a. Speed
 - b. Density
 - c. Volume
 - d. None of these.
2. Which among the following is a three-dimensional physical quantity.
 - a. Length
 - b. Mass
 - c. Volume
 - d. Height
3. If an object is moving along a straight line keeps changing its speed, what kind of motion does it show.
 - a. Uniform Motion
 - b. Non-Uniform Motion
 - c. slow motion
 - d. At rest
4. A soccer ball undergoes
 - a. Rotational motion
 - b. Translational motion
 - c. both a & b
 - d. None
5. The combination of rotatory motion and translatory motion is called
 - a. Oscillatory motion
 - b. Vibratory motion
 - c. Rolling motion
 - d. Random motion
6. Tidal energy is the energy harnessed by
 - a. Biomass
 - b. Sea Waves
 - c. Wind
 - d. Sun
7. The channelised form of energy is
 - a. Volume
 - b. Work
 - c. Force
 - d. Power

8. Regular reflection occurs on
a. Rough surface b. Smooth surface c. Polished surface d. both c & d
9. The image formed by the plane mirror is
a. Real b. Virtual c. Inverted d. Enlarged
10. Virtual image is
a. Erect b. Inverted c. obtained on the screen d. all the above
11. The change in position of the object is
a. Distance b. displacement c. volume d. none of these
12. Of an object is same everywhere
a. Mass b. Weight c. Both a & b d. none of these
13. Which of the following is shown by a free-falling object
a. Uniform speed b. uniform velocity c. uniform acceleration d. uniform motion
14. Is the actual length travelled by the moving object
a. Distance b. displacement c. velocity d. speed
15. Acceleration due to gravity is represented by the letter
a. h b. g c. E d. V
16. identify the conventional source of energy
a. sun b. biomass c. coal d. water
17. energy can be seen as stored form of
a. speed b. mass c. work d. density
18. The S.I unit of density is
a. Kg b. m³ c. kg/m³ d. g/cm³
19. A person sitting in a moving car is at rest with respect to this
a. Another person in the same car b. Tree near the road
c. A person moving on the road d. None of these
20. Which of the following is an example of conversion of chemical energy to heat energy.
a. Electric bell b. Solar cell c. Power plant d. electromagnet.
21. Which among the following is the non-conventional source of energy
a. Wind b. Water c. Coal d. Light
22. Identify the secondary colour.
a. Red b. Green c. Blue d. Magenta
23. 15 litres of milk equals
a. 1500 ml b. 150 ml c. 15000 ml d. 15 ml
24. A needle of sewing machine shows... motion
a. Translatory b. vibratory c. oscillatory d. rotatory
25. the energy stored in a compound or matter
a. nuclear b. muscular c. chemical d. sound

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