

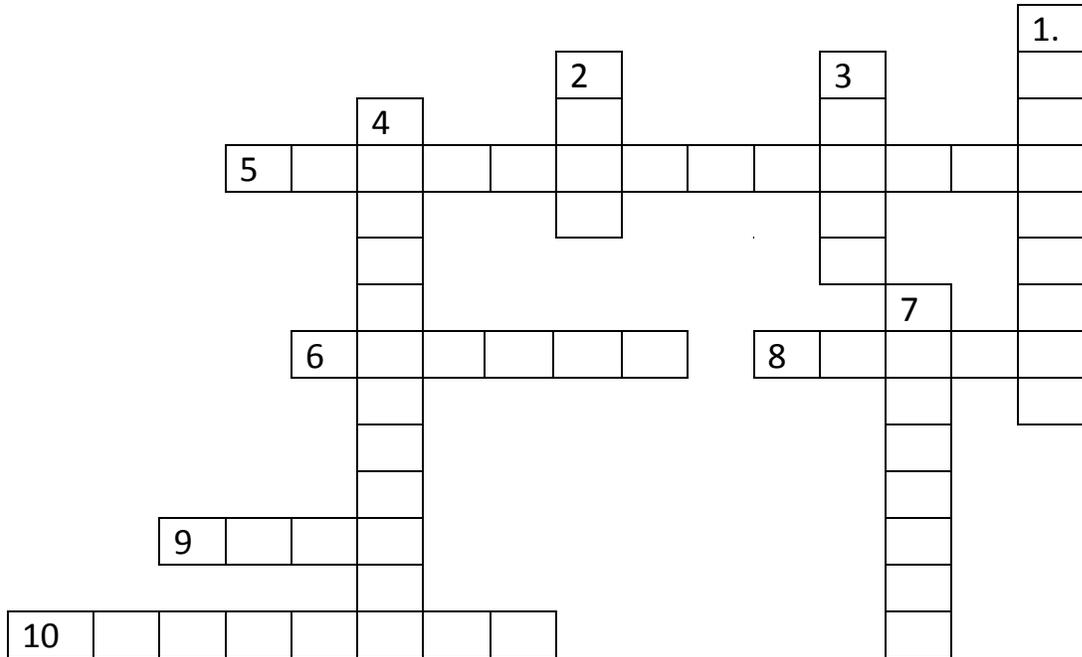
CLASS 9

PHYSICS

HOLIDAY ASSIGNMENTS (2017-2018)

MOTION

1. Solve the crossword puzzle with the help of hints given as below



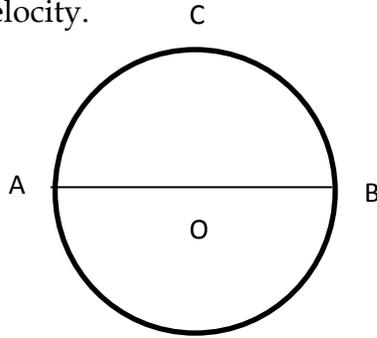
Across

5. Equal distances in equal time intervals.
6. Unit of angular displacement
8. Distance per unit time
9. Quantity plotted on X-axis in s-t graph
10. Device which measures distance

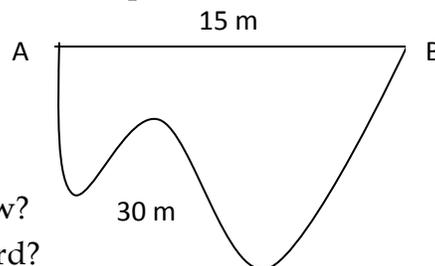
Down

1. Scalar quantity has only _____
2. When body returns back, displacement is _____
3. S.I. Unit of displacement
4. Straight line distance between two points
7. Motion is _____ in nature

2. An insect moves along a circular path of radius 10 cm with a constant speed. It takes 1 min to move from a point on the path to the diametrically opposite point, find (i) the distance covered (ii) the speed (iii) the displacement and (iv) the average velocity.



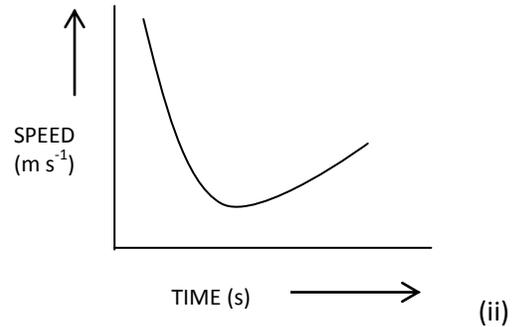
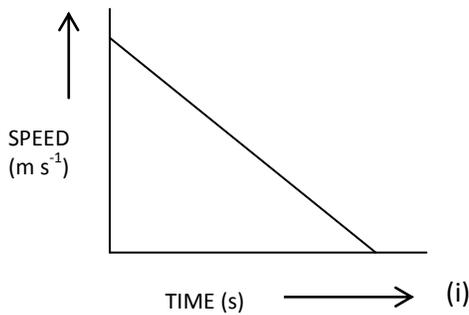
3. A girl is sitting on a merry-go-round which is moving with a constant speed of 10 ms^{-1} . This means that the girl is
- At rest
 - Moving with no acceleration
 - In accelerated motion
 - Moving with uniform velocity
4. An athlete runs on a circular track of radius 50 m from the starting point A with a constant speed. It takes 50 seconds for him to reach point B which is at the other end of the diameter drawn from A. Calculate the distance covered, displacement and the speed.
5. How will the equations of motion for an object moving with a uniform velocity change?
6. What is the importance of reference point in stating motion?
7. State the three equations of motion. Which of them describes?
- velocity-time relation?
 - position-time relation?
 - position-velocity relation?
8. A cow and a bird both travelled from point A to point B. The cow travelled in a straight line but the bird travelled along the curved path as shown below:



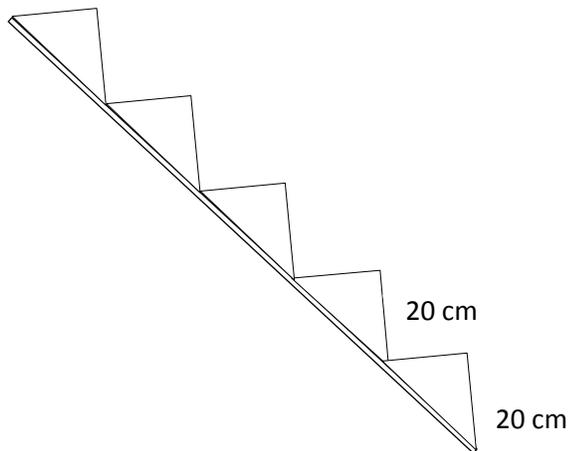
- What is the distance travelled by the cow?
- What is the distance travelled by the bird?
- Which one of them has more displacement?

9. In which condition the magnitude of displacement be equal to the distance travelled by an object?
10. Velocity of a train changes from 20 m/s to 25 m/s, when it accelerates at a rate 2m/s^2 . Find the distance covered by the train.

11. What do the graphs (i) and (ii) shown here indicate?



12. An ant climbs up five stairs, each of width 20 cm and height 20 cm. Find the distance covered and displacement of ant.



13. A body accelerates uniformly so that its velocity changes from from u to v . What will be its average velocity?
14. Suppose Ram throws a ball vertically upwards from a position P above the ground. It rises to the highest point Q and returns to the same point P . What is the net displacement and distance travelled by the ball?
15. A particle is moving in a circular path of radius r . What will be the displacement after half a circle?

Prepare a project on the application of laws of motion in daily life and present in the form of report.

BE HAPPY BE BRIGHT..... BE YOU.....

HAPPY HOLIDAYS

Holiday Assignment
Subject:- Biology
Class- IX

Chapter-1 :- The fundamental Unit of life (cell)

Q1. Name the cellular organelles related to the following phenomenon.

- (i) Intra Cellular digestion
- (ii) Site of protein synthesis
- (iii) Site of cellular respiration
- (iv) Providing different colors to plants and fruits.

Q2. In what way are chloroplast and mitochondria similar?

Q3. Explain the phenomenon of exocytosis.

Q4. Differentiate between plasma membrane and cell wall.

Q5. Classify the following processes as osmosis or diffusion.

- (i) Aquatic animals using oxygen dissolved in water during respiration.
- (ii) Swelling up of raisins on keeping in water.
- (iii) Spreading of virus on sneezing.

Q6. Differentiate between chromatin and chromosomes.

Chapter 2:- Tissues

Q1. Define differentiation.

Q2. Where is meristematic tissue located in plants?

Q3. Name the kind of muscles found in your limbs and lungs.

Q4. Which tissues are called covering or protective tissues.

Q5. List the type of inter cellular matrix present in following connective tissues.

- | | | |
|-----------|---------------|--------------------|
| (a) blood | (d) cartilage | (g) areolar tissue |
| (b) lymph | (e) tendon | (h) adipose tissue |
| (c) bone | (f) ligaments | |

Q6. Name the fat storing tissues? Where are they located? How do these tissues help?

Q7. Which muscle tissues show characteristic of both striated and unstriated Muscles?

Chapter- 3 :- Diversity in living organisms.

Q1. Identify the animal group having

- (a) spiny body and radial symmetry
- (b) four pairs of jointed legs.
- (c) Bones light and hollow.
- (d) External ear or pinna present.
- (e) Soft bodied animals supported by calcareous shell.

Q2. What are the common features of amphibians and insects?

Q3. In which kingdom viruses are placed?

Q4. Draw an earthworm and a fish and label its parts.

Q5. Differentiate between monocot and dicot plants.

Q6. What are the major divisions of classifications of living beings?

Q7. Classify the following into their respective phylum and mention one characteristic feature of each scorpion, hydra, starfish , unio.

HOLIDAY HOMEWORK, YR 2017 - 18

CLASS IX
CHEMISTRY

GENERAL INSTRUCTIONS:

- The assignment should be done in your Chemistry register.
- The assignment should be submitted on 3rd July 2017.

Answer the following questions:-

1. When sugar is added to water, there is no increase in the volume. Which characteristic property of matter is illustrated by this observation?
2. A piece of chalk can be broken into small particles by hammering it but a piece of iron cannot be broken into small particles by hammering. Which characteristic property of matter is illustrated by this observation?
3. Name the process by which a drop of ink spreads in a beaker of water.
4. How does the change in temperature affect the rate of diffusion between particles of two gases?
5. What is the physical state of water at:
 - a) 0°C
 - b) 25°C
 - c) 100°C
 - d) 250°C
6. Why is solid carbon dioxide called dry ice?
7. Ice at 0°C is more effective at cooling than water at 0°C. Explain.
8. Naphthalene balls kept in stored clothes in our homes, disappear over a period of time. Why?
9. How does perspiration or sweating keep our body cool on a hot day?
10. Why does a desert cooler, cool better on hot and dry day?
11. If the back of your hand is moistened with alcohol, you will find it rapidly becomes dry. Why is it that while it is drying, your hand feels cool?
12. When a crystal of copper sulphate is placed at the bottom of a beaker containing water, the water slowly turns blue. Why?
13. Jar A contains a red-brown gas and Jar B contains a colourless gas. The two gas jars are separated by a glass plate placed between them. What will happen when the glass plate between the two jars is pulled away? What name is given to the phenomenon which takes place?
14. Why are gases highly compressible whereas solids are incompressible?
15. Camphor disappears without leaving any residue. Explain?
16. Both the process of evaporation and boiling involves the change of state from liquid to gas but still they are different from each other. Justify.

17. What is the significance of boiling point & melting point of a substance?
 18. Wet clothes do not dry easily on a rainy day. Why?
 19. Arrange in the order indicated for solid, liquid and gas.
 - a) Effect of pressure
 - b) Empty spaces in the particles
 - c) Tendency to flow
 - d) Thermal expansion/expansion due to heat
 20. Which of the following diffuses faster: Honey, Sugar, Nitrogen gas
 21. Why does the temperature of a substance remain constant during its melting point or boiling point?
 22. What property of butane is utilized when it is supplied as L.P.G.?
 23. Why does ice float on water?
 24. Why does a gas fill a vessel completely in which it is kept?
 25. Latent heat of vaporization of liquid A is 100 J/Kg and liquid B is 150 J/Kg. which liquid can produce more cooling effect and why?
 26. Doctors advise to put strips of wet cloth on the forehead of a person having a high fever. Why?
 27. Water kept in an earthen pot becomes cool during summers. Why?
 28. Sponge is a solid but can be compressed. Why?
 29. Melting points of two substances A and B are 280 K and 320 K. Are these substances in the liquid form at room temperature? Justify your answer.
 30. Explain how the following factors affect the rate of evaporation of a liquid:-
 - a) Temperature of the liquid
 - b) Windspeed
 - c) Area of the exposed surface
 - d) Moisture content in the air
 31. Describe an activity to show that particles of matter are continuously moving.
 32. What produces more severe burns, boiling water or steam? Explain Why?
 33. Convert the following to °F and K:-
 - a) 35°C
 - b) 50°C
 - c) 100°C
 34. Convert the following to °C:-
 - a) 343 K
 - b) 589 K
 - c) 273 K
 - d) 98.4°F
 - e) 108°F
 35. Evaporation produces cooling. Justify this statement.
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