INTERNATIONAL INDIAN SCHOOL DAMMAM

QUESTION BANK FOR MID-TERM EXAM 23-24

CLASS: IX, SUBJECT: CHEMISTRY

Chapter-1 Matter in our surroundings

I Choose the correct option

1. Dry ice is ----------

a) Water in solid state.
b) Water in gaseous state
c) CO^2 in liquid state
d) CO^2 in solid state

2. Matter is classified on the basis of…….

a) Physical and chemical properties
b) Physical and biological properties
c) Chemical properties
d) Biological and characteristic properties.

3. Temperature increases with……

a) Increasing kinetic energy
b) Increasing temperature
c) Increasing pressure
d) Decreasing pressure

4. The boiling point of three substances is 35ºC, 56ºC, 118ºC. Which is the correct representation in Kelvin scale?

a) 308K 329K 391K
b) 308K 329K 392K
c) 308K 329K 391K
d) 329K 392K 308Ka

5. …….. And..... Gaseous are essential for the survival of aquatic animals and plants.

a) Hydrogen, oxygen
b) Carbon dioxide, nitrogen
c) Oxygen, water
d) Carbon dioxide, oxygen

6. The amount of the heat energy required to change 1kg of solid into liquid at atmospheric pressure at its melting point is known as……

a) Fission of heat
b) Fusion of heat
c) Latent heat of fusion
d) Latent heat of fission

7. A few substances are arranged in the increasing order of 'forces of attraction' between their particles. Which one of the following represents a correct arrangement?
(a) Water, air, wind
(b) Air, sugar, oil
(c) Oxygen, water, sugar
(d) Salt, juice, air

8. The quantity of matter present in an object is called its:
(a)Weight
(b)Gram
(c)Mass
(d)Density

9. The state of matter which consists of super energetic particles in the form of ionized gases is called:
(a)Gaseous state
(b)Liquid state
(c)Bose- Einstein condensate
(d)Plasma state

10. S. I. unit of temperature is:
(a)Celsius
(b)Fahrenheit
(c)Kelvin
(d)None of these

11. Which of the following cannot be considered a form of matter?

(a) Atom
(b) Water
(c) Humidity
(d) Electron

12. Which one of the following set of phenomena would increase on raising the temperature?
(a) Diffusion, evaporation, compression of gases
(b) Evaporation, compression of gases, solubility
(c) Evaporation, diffusion, expansion of gases
(d) Evaporation, solubility, diffusion, compression of gases

13. Which of the following is most suitable for summer?

(a) Cotton
(b) Nylon
(c) Polyester
(d) Silk.

14. Under which of the following conditions we can boil water at room temperature?

(a) At low pressure
(b) At high pressure
(c) At very high pressure
(d) At atmospheric pressure

15. Which of the following does not affect rate of evaporation?

(a) Wind speed
(b) Surface area
(c) Temperature
(d) Insoluble heavy impurities

II. Long Answer type questions

1) When 50 g of sugar is dissolved in 100 mL of water, there is no increase in volume. What characteristic of matter is illustrated by this observation?

2) Convert the following into Kelvin scale:
a) 27 ºC b) 378º C

3) Explain evaporation and its cooling effect in terms of kinetic energy of particles.
Tabulate three differences between boiling and evaporation

4) Why does the temperature of a substance remain constant during its melting point or boiling point?

III. Short Answer type questions

1) Which produce more severe burns boiling water or steam ?

2) Cotton is solid but it floats on water. Why?

3) Name the factors that affect evaporation

4) Camphor disappears without leaving any residue. Explain?

IV. Fill in the blanks:

1. Evaporation of a liquid at room temperature leads to a_____effect.
2. At room temperature, the forces of attraction between the particles of solid substances are___than those which exist in the gaseous state.
3. The arrangement of particles is less ordered in the_____state. However, there is no order in the_____state.
4. _____is the change of gaseous state directly to solid state without going through the state.
5. The phenomenon of the change of a liquid into the gaseous state at any temperature below its boiling point is called____.

V. Give reason for the following:

1) Why does a gas fill completely the vessel in which it is kept?
2) Wet clothes do not dry easily on a rainy day.
3) Ice at 273K is more effective in cooling than water at 273K.

VI. ASSERTION REASON QUESTIONS

.**In the following Questions, the assertion and reason have been put forward. Read the statements carefully and choose the correct alternative from the following:**

(a).) Both assertion and reason are correct and reason is the correct explanation for assertion.

(b) The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.

(c) Assertion is true but the Reason is false.

(d) The statement of the Assertion is false but the reason is true.

1) Assertion: Compressed natural gas is used as fuel in vehicles.

Reason: CNG is contain natural gas

2) **Assertion:** Particles in steam that is water vapor at 373K have more energy than water at same temperature**.**

Reason: -Particles in steam have absorbed extra energy in the form of latent heat of vaporization

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QUESTION BANK FOR MID-TERM EXAM 23-24
CLASS: IX, SUBJECT: CHEMISTRY

CHPATER – 2 IS MATTER AROUND US PUREWORKSHEET

Q1 Choose the correct option :

1. What is the name of the metal which exists in liquid state at room temperature?
(a) Sodium
(b) Potassium
(c) Mercury
(d) Bromine

2. If we put camphor in an open container, its amount keeps on decreasing due to thephenomenon of
(a) Evaporation
(b) Precipitation
(c) Condensation
(d) Sublimation

3. Heterogeneous mixture in which the solute particles do not dissolve and remain suspendedthroughout the solvent and the solute particles can be seen with the naked eye is known as:
(a) Colloidal solution
(b) Super saturated solution
(c) Sublimation
(d) Suspensions

4. In tincture of iodine, find the solute and solvent?
(a) alcohol is the solute and iodine is the solvent
(b) iodine is the solute and alcohol is the solvent
(c) any component can be considered as solute or solvent
(d) tincture of iodine is not a solution

5. A pure substance which is made up of only one kind of atom and cannot be broken into two ormore simpler substances by physical or chemical means is referred to as
(a) compound
(b) an element
(c) a molecule
(d) a mixture

6. The amount of solute present per unit volume or per unit mass of the solution/solvent isknown as
(a) Composition of solute
(b) Concentration of a solvent

(c) Concentration of a solute
(d) Concentration of a solution

7. Rusting of an article made up of iron is called
(a) corrosion and it is a physical as well as chemical change
(b) dissolution and it is a physical change
(c) corrosion and it is a chemical change
(d) dissolution and it is a chemical change

8. Sol and gel are examples of
(a) Solid-solid colloids
(b) Sol is a solid-liquid colloid and gel is liquid solid colloid
(c) Sol is solid-solid colloid and gel is solid-liquid colloid
d) Sol is a liquid-solid colloid and gel is a solid-liquid colloid

9. Cooking of food and digestion of food:
(a) are both physical processes
(b) are both chemical processes
(c) cooking is physical whereas digestion is chemical
(d) cooking is chemical whereas digestion is physical

10. Which of the following properties does not describe a compound?

(a) It is composed of two or more elements
(b) It is a pure substance.
(c) It cannot be separated into constituents by physical means
(d) It is mixed in any proportion by mass

Fill in the blanks

1. If the amount of solute contained in a solution is less than the saturation level , it is calledas__.
2. Properties of a_____are different from its constituent elements, whereas a ___ shows the properties of its constituting elements.
3. A solution is defined as a mixture that is____.

Short answer type questions
Q1. State the difference between pure and impure substances.Q2 What are the two components of a solution.
Q3. What is solubility.
Q4. Differentiate between mixture and compound.

Long Answer type questions
Q1. Define evaporation. Explain the factors that affect its rate.
Q2. A solution contains 40 g of common salt in 320 g of water . Calculate the concentration in terms of mass by mass percentage of the solution.

Q3. Write the properties of solution, suspension and colloid.
Q4. Differentiate between homogenous mixture and heterogenous mixture.Q5. Differentiate between physical change and chemical change.

Assertion - Reasoning based questions.

These consist of two statements – Assertion (A) and Reason (R). Answer these questions selectingthe appropriate option given below:
(a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true and R is not the correct explanation of A
(c) A is true but R is false
(d) A is False but R is true

Q.1. Assertion : When a beam of light is passed through a colloidal solution placed in a dark place the path of the beam becomes visible.
Reason : Light gets scattered by the colloidal particles.

Q2. Assertion : A solution of table salt in a glass of water is homogeneous.
Reason : A solution having different composition throughout is homogeneous.

INTERNATIONAL INDIAN SCHOOL DAMMAM

QUESTION BANK FOR MID-TERM EXAM 23-24

CLASS: IX, SUBJECT: PHYSICS

CHAPTER-8 MOTION

CHOOSE THE CORRECT ANSWER

1. An example of a body moving with constant speed but still accelerating is
   (a) A body moving in a helical path with constant speed
   (b) A body moving with constant speed on a straight road
   (c) A body moving with constant speed in a circular path
   d) A body moving with constant speed on a straight railway track

2. An object travels 20 m in 5 sec and then another 40 m in 5 sec. What is the average speed of the object?
   (a) 6 m/s
   (b) 2 m/s
   (c) 12 m/s
   (d) 0 m/s

3. Acceleration is a vector quantity, which indicates that its value
   (a) Can be positive, negative or zero
   (b) Is always positive
   (c) Is always negative
   (d) Is zero

4. Which of the following is most likely not a case of uniform circular motion?
   (a) Motion of the earth around the sun
   (b) Motion of a toy train on a circular track
   (c) Motion of a racing car on a circular track
   (d) Motion of hours' hand on the dial of a clock

5. A man is moving with 36 kmph. The time of reaction is 0.9 seconds. On seeing an obstacle in the path, he applies brakes and decelerates at 5 m/s2, the total distance covered before he stops is:
   (a) 19 m
   (b) 17 m
   (c) 16 m
   (d) 18 m

6. The slope of the distance-time graph is:
   (a) Distance
   (b) acceleration
   (c) Speed
   (d) Displacement

Directions: In each of the following questions, a statement of Assertion is given and a corresponding statement of Reason is given just below it. Of the statements, given below, mark the correct answer as: (a) Both Assertion and Reason are true and reason is the correct explanation of assertion. (b) Both Assertion and Reason are true but reason is not the correct explanation of assertion. (c) Assertion is true but Reason is false. (d) Both Assertion and Reason are false.

1. **Assertion**: Displacement of an object may be zero even if the distance covered by it is not zero.
   Reason: Displacement is the shortest distance between the initial and final position.

2. **Assertion**: Velocity versus time graph of a particle in uniform motion along a straight path is a line parallel to the time axis.
   Reason: In uniform motion the velocity of a particle increases as the square of the time elapsed.

Fill in the blank

1. A body moving in a straight line has a uniform motion if it travels_____distance in equal time intervals.
2. The device used to measure speed of a car_____
3. When s-t graph is parallel to x-axis, the body is ———-
4. An odometer in a car measure ————
5. Velocity (v) of an object in uniform circular motion is Calculated by_____
6. The curved speed time graph represents_____accelerated motion
7. Tractor moving with 18 km/h is_____then car moving with 1500 m/min

ANSWER THE FOLLOWING

1.A particle moving with an initial velocity of 5m/s is subjected to a uniform acceleration of $2.5 m/s^2$. Find the displacement in the next 4 sec.?

2. An object moves along a circular path of diameter 14cm with constant speed. If it takes 2 min. to move from a point on the path to the diametrically opposite point. Find
(a) The distance covered by the object
(b) The speed
(c) The displacement
(d) average velocity

3. A train accelerated from 20km/hr to 80km/hr in 4 minutes. How much distance does it cover in this period? Assume that the tracks are straight?

4. An artificial satellite is moving in a circular orbit of radius 42250 km. calculate its speed if it takes 24hrs to revolve around the earth.

5. Distinguish between speed and velocity.

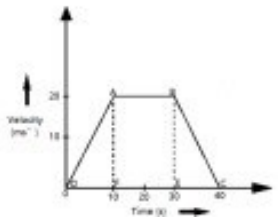
CASE BASED QUESTION

1. Using the following data draw displacement - time graph for a moving object

Time (s)	0	2	4	6	8	10	12	14	16
Displacement (m)	0	2	4	4	4	6	4	2	0

Use this graph to find average velocity for first 4 s, for next 4 s and for last 6 s

2. The velocity -time graph of a body is shown below: (a)State the kind of motion represented by OA and AB. (b)What is the negative acceleration of the body? (c)Find the velocity of the body after 10 s and after 40 s. (d) Find the distance travelled between10th and 30th second.



3. Rajeev went from Delhi to Chandigarh on his motorbike. The odometer of the bike reads4200 Km at the start of the trip and 4460Km at the end of his trip. If Rajeev took 4 h 20 min to complete his trip, find the average speed in Km/hr. as well as m/s.

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QUESTION BANK FOR MID-TERM EXAM 23-24

CLASS: IX, SUBJECT: PHYSICS

LESSON 9 - FORCE AND LAWS OF MOTION

Select and write most appropriate option out of the four options given for the each of the questions

1) When a force is exerted on an object,it can change it's
A) State
B) Position
C) Shape
D) All of the above

2) When balanced force act on a body,the body
A) Must retain its state of rest
B) Must continue with uniform velocity,if already in motion
C) Must experience some acceleration
D) Both A&B

3) The S.I unit of force is
A) Kilowatt
B) Newton
C) Watt
D) Joule

4) The inertia of an object tends to cause the object
A) To increase it's speed
B) To decrease it's speed
C) To resist any changes in it's state of motion
D) To decelerate due to friction

5) If A and B are two objects with masses 8 Kg and 32 Kg respectively,then
A) A has more inertia than B
B) B has more inertia than A
C) A and B have the same inertia
D) Neither of the two has inertia

6) The relation between acceleration,mass and force is given by
A) $a \times F = m$
B) $F = m/a$
C) $F \times m = a$
D) $F/m = a$

7 Which among the following is true as per Newton's third law of motion
A) Action and reaction forces are always equal and opposite
B) Action and reaction forces are always perpendicular
C) Action and reaction forces are always unequal
D) Action and reaction forces act in same direction

8) While catching a ball,a player lowers his hands to
   A) Avoid getting hurt
   B) Increase the time to slow down
   C) Decrease the time to slow down
   D) Avoid the breaking of the ball

9) What do we get by the product of mass and velocity?
   A)Force
   B) Inertia
   C) Momentum
   D)Newton

10) When a horse pulls a cart, the force which is responsible for the movement of cart is:
   A)the force of the horse on the cart
   B)the force of the ground on the horse
   C)the force of the ground on the cart
   D)the force of the horse on the ground

Fill in the blanks

1) Newton's first law of motion is also known as…….
2) Linear inertia measures……of the body
3) The people in a bus are pushed backwards when the bus starts suddenly because of……
4) The quantity of motion possessed by the body is called……
5) A body of mass 20 Kg moves with an acceleration of 2m/s . Then the rate of change of momentum in the SI unit is ……

Short Answer Type Questions

1) What are balanced and unbalanced forces?
2) A javelin throw is marked foul if the athlete crosses over the line marked for throw. Explain why an athlete often fails to stop himself before that line?
3) How can Newton's first law be deduced from the second law?
4) A stone of 1 kg is thrown with a velocity of 20 m/s across the frozen surface of a lake and comes to rest after travelling a distance of 50m. What is the force of friction between the stone and the ice?
5) A hammer of mass 500 g moving at 50 m/s , strikes a nail. The nail stops the hammer in a very short time of 0.01 s . What is the force of the nail on the hammer?
6) What is momentum? Write it's SI unit.
7) A motor car of mass 1200kg is moving along a straight line with uniform velocity of 90 km/h. It's velocity is slowed down to 18 km/h in 4 s by an unbalanced force. Calculate the acceleration and change in momentum

Case Based Questions

(1) Newton’s first law of motion states that a body at rest will remain at rest position only and a body which is in motion continues to be in motion unless otherwise they are acted upon by an external force. In other words, all objects resist a change in their state of motion. In a qualitative way, the tendency of undisturbed objects to stay at rest or to keep moving with the same velocity is called inertia. This is why the first law of motion is also known as the law of inertia. Answer the

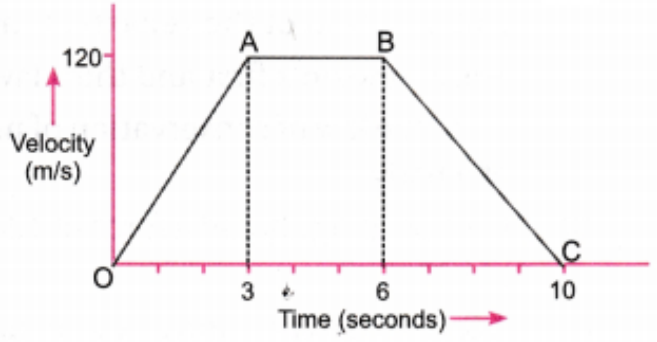
following questions.

i) The first law of motion is also known as ……

(ii)State Newton's first law of motion.

(iii)why Newton's first law of motion is called law of inertia

(2) The velocity-time graph of an object of mass m = 50 g is shown in figure. Observe the graph carefully and answer the following questions.
(a) Calculate the force on the object in time interval 0 to 3 s.
(b) Calculate the force on the object in the time interval 6 to 10 s.
(c) Is there any time interval in which no force acts on the object? Justify your answer.



Assertion - Reasoning based questions.

These consist of two statements - Assertion (A) and Reason (R). Answer these questions selecting the appropriate option given below
(a) Both the Assertion and Reason are correct and the Reason is the correct explanation of the Assertion.
(b) The Assertion and the Reason are correct but the reason is not the correct explanation of the Assertion.
(c) Assertion is true but the Reason is false.
(d) The statement of the Assertion is false but the Reason is true.

1) Assertion: The recoil velocity of gun is much less than that of bullet
   Reason: Less force due to the bullet is exerted on the gun than that exerted by gun on the bullet

2) Assertion: A bicycle has to be pedaled again and again to keep it moving with uniform velocity.
   Reason: Force is applied on the bicycle to balance the force of friction exerted by the ground on the bicycle .