INTERNATIONAL INDIAN SCHOOL DAMMAM

QUESTION BANK FOR EXAM 2024-25

CLASS IX, SUBJECT: PHYSICS

CHAPTER- 9 GRAVITATION : WORKSHEET

Q1. Choose the correct option:

1. The value of acceleration due to gravity near the Earth's surface is
   a) 9.8 m/s
   b) 8.9 m/s^2
   c) 9.8 m/s^2
   d) 8.9 m/s^2

2. The motion of the moon around the Earth is due to the centripetal force. The necessary centripetal force is provided by
   a) gravitational force
   b) force of friction
   c) magnetic force
   d) electrostatic force

3. The SI unit of G is
   a) $Nm^2\ kg^{-2}$
   b) $Nm^2\ kg^2$
   c) $kg\ ms^{-2}$
   d) $kg\ ms^{-1}$

4. The gravitational force between two bodies does not depend on
   a) their separation
   b) their masses
   c) the product of their masses
   d) the medium between the two bodies

5. The gravitational force between two objects is **F**. if masses of both objects are halved without altering the distance between them, then the gravitational force would become
   a) **F**/4
   b) **F**/2

c) **F**
d) 2**F**

6. The weight of an object
a) is the quantity of matter it contains.
b) refers to its inertia.
c) is the force with which it is attracted to the Earth.
d) is same as the mass.

7. The value of *g* is maximum
a) at equator of the Earth
b) at poles of the Earth
c) in a mine
d) at a high hill

8. A body of mass 1 kg is attracted by the Earth with a force which is equal to
a) 9.8N
b) 1 N
c) 9.8 m/s
d) 1 m/s

9. The atmosphere is held to Earth by
a) clouds
b) Earth's magnetic field
c) wind
d) gravity

10. An object weighs 10 N when measured on the surface of the Earth. What should be its weight on moon?
a) 4.18 N
b) 1.67 N
c) 2.20 N
d) 16.7N

11. The volume of a solid of mass 500 g is 350 cm^3. If the density of water is 1 g cm^{-3}, what will be the mass of water displaced by the solid?
a) 35 g
b) 350 g

c) 1.42 g
d) 14.2 g

12. A girl stands on a box having 60cm length,40 cm breadth, and 20 cm Width in three ways. In which of the following cases pressure exerted by the brick will be
a) maximum when length and breadth form the base
b) maximum when breadth and width form the base
c) maximum when width and length form the base
d) is same all to above three cases.

Fill in the Blanks

1. The initial velocity of freely falling object is _____.

2._____ is the quantity of matter contained in the body.

3. The weight of the body _____ from pole to equator.

4. Gravitation is a _____force unless large masses are involved.

5. The value of G was found out by _____.

6. _____is the force acting on a body perpendicular to its surface.

7. All objects experience _____ when they get immersed in a fluid.

Short Answer Questions

1. Define centripetal force.

2. Differentiate between mass and weight.

3. Why a heavy object does not fall faster than a light object?

4. Calculate the value of g. (Mass of the earth= 6×10^{24} kg, Radius of the earth= 6.4×10^{6} m)

5. Why does formation of tides take place in sea or ocean?

6. You have a bag of cotton and an iron bar, each indicating a mass of 100 kg when measured on a weighing machine. In reality, one is heavier than other. Can you say which one is heavier and why?

7. Why does an object sink or float when placed on the surface of water?

Long Answer Questions

1. Derive an expression for force of attraction between two bodies and then define gravitational constant.

2. Write the importance of the universal law of gravitation.

3. Define acceleration due to gravity (g). Derive an expression for acceleration due to gravity in terms of mass of the Earth (M) and universal gravitational constant (G).

4. A ball thrown up vertically returns to the thrower after 8 s. Find:

(a) the velocity with which it was thrown up.
(b) the maximum height it reaches.
(c) its position after 6 s.

5. State Archimedes' principle. Write its applications.

Assertion-Reason Questions

These consists of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate options given below:

a) Both A and R are true, and R is the correct explanation of A.

b) Both A and R are true, but R is not the correct explanation of A.

c) A is true, but R is false.

d) A is false, but R is true.

1. Assertion (A): The value of 'g' is greater at the poles than at the equator.

Reason (R): Radius is more at the equator than at the poles.

2. Assertion (A): Mass remains constant at every point in the in the universe.

Reason (R): Mass of a body can be zero.

3. Assertion (A): The cork floats while the nail sinks on the surface of water.

Reason (R): An object floats or sinks on the basis of its density.

4. Assertion (A): Pressure on loose sand is smaller while standing than while lying down.

Reason (R): Pressure is the force acting on unit area of a surface.

Case Based Questions

1.Read the given passage and answer the questions based on the passage and related study concepts.

The universal law of gravitation, proposed by Sir Isaac Newton, is widely accepted to find the magnitude of attractive gravitational force between any two bodies in the universe. Greater than distance between the bodies, weaker is the gravitational force between them and vice versa. Two bodies attract each other with equal and opposite force irrespective of their individual masses as gravitational force is directly proportional to product of masses.

(a)How does the gravitational force change if distance between the objects is halved?

(b) If two bodies attract each other with equal and opposite forces, then why does an apple fall towards earth and not earth towards apple?

(c)Two objects of mass 10 kg and 20kg are separated by a distance 10m. What is gravitational force between them?

CHAPTER- 10 WORK AND ENERGY: WORKSHEET

Q1. Choose the correct option:

1. The work done is zero if

(a) The body shows displacement in the opposite direction of the force applied.
(b) The body shows displacement in the same direction as that of the force applied.
(c) The body shows a displacement in perpendicular direction to the force applied.
(d) The body moves obliquely to the direction of the force applied.

2. If the velocity of a body is doubled its kinetic energy

(a) gets doubled
(b) becomes half
(c) does not change
(d) becomes 4 times

3. A student carries a bag weighing 5 kg from the ground floor to his class on the first floor that is 2 m high. The work done by the boy is

(a) 1 J (b) 10 J (c) 100 J (d) 1000 J

4. The unit of work is joule. The other physical quantity that has same unit is

(a) power (b) velocity (c) energy (d) force

5. The gravitational potential energy of an object depends on its
a) Mass only
b) Height above the ground only
c) Mass and height above the ground
d) Velocity

6. Work done in unit time is known as
a) Power b) Energy
c) Force d) Momentum

7. A stone is thrown vertically upward. It comes to rest momentarily at the highest point. What happens to its kinetic energy?

a) It converts in to elastic potential energy.
b) It converts in to gravitational potential energy.
c) It converts into chemical energy.
d) It converts into sound energy.

8. A body of mass ‘m’ falls from a height ‘h’. At any point on its path, the total energy is

a) $\frac{1}{2}$ mgh
b) $\frac{1}{4}$ mgh
c) mgh
d) depends on height

9. A body is falling from a height ‘h’. After it has fallen a height h/2 it will possess

a) only potential energy
b) only kinetic energy
c) half potential and half kinetic energy
d)more kinetic and less potential energy

10. Two boys A and B lift 100 bricks through the same height in 5 minutes and 6 minutes respectively, then

a) A has more power than B
b) B has more power than A
c) Both has same power
d) Data insufficient

Fill in the Blanks

1. The capacity of a body or a person to do work is its _____.

2. When the displacement is in the direction of the force, the work done is _____.

3. Energy can be changed from one form to another, but the total energy of the system is always _____.

4. Water stored in a dam possess _____ energy.

5. The sum of the potential and kinetic energies of a body is called _____ energy.

Short Answer Questions

1. Avinash can run at a speed of 8 ms^{-1} against the frictional force of 10 N, and Kapil can move at a speed of 3 ms^{-1} against the frictional force of 25 N. Who is more powerful and why?

2. List two essential conditions for work to be done.

3. A mass of 8 kg is at a point A on a table. It is moved to a point B. If the line joining A and B is horizontal, what is the work done on the object by the gravitational force? Explain your answer.

4. Define gravitational potential energy.

5. When a force retards the motion of a body, what is the nature of work done by the force? State reason. List two examples of such a situation.

6. A man of mass 60 kg runs up a flight of 20 steps in 30 seconds. if each step is 20 cm high, calculate his power.

7. Calculate the work required to be done to stop a car of 1700 kg moving with a velocity of 54 km/h?

Long Answer Questions

1. (a) Derive an expression for kinetic energy of an object.
   (b) If the velocity of an object is tripled, what will be change in its kinetic energy?
   (c) If the velocity of an object is halved, what will be change in its kinetic energy.

2. (a) State law of conservation of energy.
   (b) Explain the conservation of energy in case of a simple pendulum.

3. (a) Calculate the work done by the brakes of a car of mass 1000 kg when its speed is reduced from 20m/s to 10 m/s.
   (b)To what height should a box of mass 150kg be lifted, so that its potential energy may become 7350 joules?

4. (a) Define Power. What is its unit?
   (b) Find the energy in joules consumed in 8 hours by five devices of power of 400 W each.

Assertion-Reason Questions

These consists of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate options given below:

a) Both A and R are true, and R is the correct explanation of A.

b) Both A and R are true, but R is not the correct explanation of A.

c) A is true, but R is false.

d) A is false, but R is true.

1. Assertion (A): A winded toy car, when placed on floor, starts moving.

Reason (R): Toy car has kinetic energy stored in it, which facilitates its motion.

2. Assertion (A): The total energy before and after the transformation remains the same.

Reason (R): Energy can only be converted from one form to another, it can neither be created, nor be destroyed.

3. Assertion (A): A flying aeroplane possesses both potential and kinetic energies.

Reason (R): The work done will be equal to the product of the force and displacement.

4. Assertion (A): A more powerful vehicle would complete a journey in a shorter time than a less powerful one.

Reason (R): Power measures the speed of work done, that is how fast or slow work is done.

Case Based Questions

1. Read the given passage and answer the questions based on the passage and related study concepts.

Work is said to be done when the force is applied on an object produces a displacement of the object in the direction of force applied. For example, when we push or pull a heavy load or lift it above the floor then we are doing work, but a man carrying heavy load and standing still is not doing any work. Work, which is the product of force and displacement, has only magnitude and no direction. So, it is a scalar quantity.

(a) Define 1 J of work.

(b) If force and displacement of the particle (in direction of force) are doubled, what will be the change in work done.

(c) A student carries a bag weighing 5 kg from the ground floor to his class on the first floor that is 2 m high. What is the work done by the boy?

(d) Calculate the value of work done in holding a suitcase of 15 kg while waiting for a bus for 40 minutes.

CHAPTER- 11 SOUND: WORKSHEET

Q1. Choose the correct option:

1. Sound is produced due to:

   (a) Vibrations of objects
   (b) Reflection of light
   (c) Change in pressure
   (d) Change in temperature

2. The medium through which sound travels the fastest is:

   (a) Air (b) Water (c) Steel (d) Vacuum

3. The unit of frequency is:

   (a) Newton (b) Hertz (c) Decibel (d) Joule

4. Which of the following statements is true about sound?

   (a) It cannot travel in a solid.

   (b) It travels faster in liquids than in gases.

   (c) It can travel through a vacuum.

   (d) It travels at the same speed in all media.

5. The range of audible sound for humans is:

(a) 0 Hz to 20 Hz

(b) 20 Hz to 20,000 Hz

(c) 20,000 Hz to 50,000 Hz

(d) Above 50,000 Hz

6. The time period of a wave is the:

(a) Number of oscillations per second

(b) Time taken to complete one oscillation

(c) Distance traveled in one oscillation

(d) Maximum displacement from the mean position

7. Echoes are produced due to:

(a) Refraction of sound

(b) Reflection of sound

(c) Diffraction of sound

(d) Absorption of sound

8. What determines the loudness of a sound?

(a) Frequency of the wave

(b) Amplitude of the wave

(c) Wavelength of the wave

(d) Speed of the wave

9. The pitch of a sound depends on its:

(a) Frequency (b) Amplitude (c) Speed (d) Wavelength

10. Sound waves with frequencies below 20 Hz are called:

(a) Ultrasonic

(b) Infrasonic

(c) Audible sound

(d) Supersonic

Fill in the Blanks

1. Sound requires a ____ medium for propagation.

2. The distance between two consecutive compressions or rarefactions in a sound wave is called its ____.

3. The multiple reflections of sound waves in a large hall result in the phenomenon known as ____.

4. The ____ is the part of the sound wave where the particles are close together.

5. The sensation of sound persists in our brain for about ____ seconds, which helps us perceive continuous sound.

Short Answer Questions

1. Why sound waves are called longitudinal wave?

2. How do we detect flaws and cracks in metal blocks by using ultrasound?

3. Derive the relationship between speed, wavelength and frequency.

4. What is the audible range of human ear? What is the range of frequencies associated with infrasound and ultrasound?

5. Distinguish between loudness and intensity.

Long Answer Questions

1. Explain the mechanism of sound production and propagation.

2. Explain the phenomenon of reflection of sound. How is it used in various applications?

3. A sound wave travels at a speed of 342m/s. If the wavelength is 1.5 cm, what is the frequency of the wave? Will it be audible?

4. A person produced a sound with a siren near a cliff and heard echoes after 6 seconds. Find the distance of the siren from the cliff if velocity of sound waves produced is 330 m/s.

5. What is reverberation? How is it different from echo? Explain how reverberation is controlled in large halls.

Assertion-Reason Questions

These consists of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate options given below:

a) Both A and R are true, and R is the correct explanation of A.

b) Both A and R are true, but R is not the correct explanation of A.

c) A is true, but R is false.

d) A is false, but R is true.

1. Assertion (A): The speed of sound increases with an increase in temperature.

Reason (R): As the temperature rises, the molecules in the medium move faster, allowing sound waves to travel more quickly.

2. Assertion (A): Sound cannot travel through a vacuum.

Reason (R): Sound requires a material medium to propagate, as it travels by particle vibrations.

3. Assertion (A): A higher amplitude of a sound wave results in a higher pitch.

Reason (R): The amplitude of a sound wave determines the loudness of the sound.

4. Assertion (A): The pitch of a sound increases with an increase in frequency.

Reason (R): Higher frequency sound waves have shorter wavelengths, which make the sound appear sharper.

Case Based Questions

1. A scientist is conducting an experiment in a soundproof chamber to measure the speed of sound in different media. She first measures the speed of sound in air at room temperature (20°C), then in water, and finally in a metal rod. The scientist observes the following:

- In air, the speed of sound is measured to be approximately 343 m/s.
- In water, the speed of sound is faster, around 1,480 m/s.
- In the metal rod, the speed of sound is much faster, around 5,000 m/s.

The scientist concludes that sound travels at different speeds depending on the medium it passes through.

(a) Based on the scientist's observations, what can you conclude about the relationship between the medium and the speed of sound?

(b) Why does sound travel faster in the metal rod compared to air and water?

(c) What happens to the speed of sound when the temperature of a medium increases?

(d) If the scientist wanted to conduct the same experiment in a vacuum, what result would she expect for the speed of sound? Why?

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QUESTION BANK FOR EXAM 2024-25

CLASS IX, SUBJECT: CHEMISTRY

CHAPTER-3 ATOMS AND MOLECULES: WORKSHEET

Q1. Choose the correct option:

1. The atomicity of $K_2Cr_2O_7$ is
   I. 9
   II. 11
   III. 10
   IV. 12

2. The formula for quicklime is
   I. $CaCl_2$
   II. $CaCo_3$
   III. $Ca(OH)_2$
   IV. CaO

3. The symbol of calcium is
   I. Ca
   II. Cu
   III. Cm
   IV. Cd

4. All noble gas molecules are
   I. Monoatomic
   II. Diatomic
   III. Triatomic
   IV. Both I and II

5. The valency of nitrogen in NH3 is
   I. 1

II. 3
III. 4
IV. 5

6. The formula of ethanol is $C_2H_5 – OH$. What will be its molecular mass?

I. 46 u

II. 34 u

III. 34 g

IV. 46 g

7. The molecular mass of x is 106. x can be

I. $CaCO_3$

II. SO_3

III. Na_2CO_3

IV. NaCl

8. Which among the following is not a postulate of Dalton's atomic theory?

I. Atoms cannot be created or destroyed

II. Atoms of different elements have different sizes, masses and chemical properties

III. Atoms of same elements can combine in only one ratio to produce more than any one compound

IV. Atoms are very tiny particles which cannot be further divided.

Short Answer Questions (2m)

1. State the Law of Conservation of Mass.

2. What do you understand by the term Atomicity?

3. Give one example of polyatomic cation and polyatomic anion.

4. Define Valency with suitable example.

5. If 100g of calcium carbonate on heating produces 44g of carbon dioxide, how much quick lime will be formed? b. Which law follows from this example?

6. 2. Write the molecular formulae for the following compounds

a. Aluminium nitrate

b. Calcium phosphate

c. Sodium Sulphate

7. Calculate the molecular mass of the following:
(a) H_2CO_3
(b) $MgSO_4$

8. Which postulate of Dalton's atomic theory can explain the law of definite proportions?

Long Answer Questions (5m)

1. Give the postulates of Dalton's atomic theory.

2. Calculate the molecular masses of H2, O2, Cl2, CO2, CH4, C2H6, C2H4, NH3, CH3OH, H2S.

3. State the law of conservation of mass. Is this law applicable to the chemical reactions? Elaborate your answer with the help of an example.

Assertion-Reason Questions

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

1. Assertion: Atoms always combine to form molecule and ions.
   Reason: Atoms of most element are not able to exist independently.

2. Assertion: Atomicity of ozone is three while that of oxygen is two.
   Reason: Atomicity is the number of atoms constituting a molecule.

3. Assertion: On burning magnesium in oxygen, the mass of magnesium oxide formed is equal to the total mass of magnesium and oxygen
   Reason: In a chemical substance, the elements are always present in a definite proportion.

4. Assertion: Water molecules always contain hydrogen and oxygen in the ratio 1:8.
   Reason: Water obeys law of constant proportions irrespective of source and method of preparation.

Case Based Questions

1. Atoms of most elements are not able to exist independently. Atoms of same elements or different elements combine to form molecules and ions. (atoms exist as molecules or ions) Atoms of the same element or of different elements can join together to form molecules. The molecules of an element are constituted by the same type of atoms. Atoms of different elements join together in definite proportions to form molecules of compounds.
(i) What is the ratio between masses of carbon and oxygen in CO2?
(a) 12:32
(b) 12:16
(c) 24:16
(d) 24:32

(ii) Which of the following statements is not true about an atom.
(a) Atoms are not able to exist independently.
(b) Atoms are the basic unit from which molecules and ions are formed.
(c) Atoms are always neutral in nature.
(d) Atoms aggregate in large numbers to form the matter that we can we see , feel or touch.
(iii) Hydrogen and oxygen combine in the ratio of 1:8 by mass to form water. What mass of oxygen gas would be required to react completely with 3 gram of hydrogen gas?

(a) 23g
(b) 12g
(c) 24g
(d) 16g

(iv) Select the atom which forms triatomic molecule.
(a) Hydrogen
(b) Oxygen
(c) Chlorine
(d) Bromine

CHAPTER-4 STRUCTURE OF ATOM: WORKSHEET

Q1. Choose the correct option:

1. According to Bohr-Bury Scheme, the maximum no. of electron which can be accommodated in a given shell is given by the formula

(a) $2n^2$
(b) n^2
(c) $3n^2$
(d) 2n

2. The no. of valence electrons in Al^{3+} are

(a) 2
(b) 3
(c) 8
(d) 13

3. Elements with valency 1 are

(a) Always metals
(b) Always non metals
(c) Always metalloids
(d) Either metals or non metals

4. Rutherford experiment on Scattering of alpha-particles showed for the first time that atom has

(a) Nucleus

(b) Electron
(c) Proton
(d) Neutron

5. The alpha-particles are same as

(a) Helium atoms
(b) Helium Ions
(c) Proton
(d) Electrons

6. Which pair of atoms containing the same no. of neutrons

a) ^{12}C & ^{14}N b) ^{14}C & ^{27}Al

c) ^{17}O & ^{31}P d) ^{18}O & ^{19}F

7. Which isotope is used in the treatment of Goitre?

a) C-12
b) Cl-37
c) I-131
d) Co-60

8. Isotopes of an element contains

a) Similar physical properties
b) Similar chemical properties
c) Different no of protons
d) Different atomic numbers

Short Answer Questions (2m)

1. What are canal rays? Who discovered it?

2. What are the features of J J Thomson's model?

3. Show diagrammatically the electron distribution in Sodium atom and Sodium ion.

4. Draw a sketch of Bohr's model of atom with 3 shells.

5. What do you think would be the observation if the alpha-particle scattering experiment is carried out using a foil of a metal other than gold?

6. Write the 3 differences between isotopes and isobars. (3m)

7. Give reason:
   i. Isotopes of an element are chemically similar.
   ii. Noble gases show least reactivity.
   iii. Ions are more stable than atoms. (3m)

8. Define mass number and atomic number. Mass number and atomic number of an isotope of uranium are 235 and 92 respectively. Calculate the no. of protons and neutrons in the nucleus of the atom. (3m)

Long Answer Questions (5m)

1. (a) The element boron occurs in nature as 2 isotopes having atomic masses 10u and 11u. What are the percentage abundances of these isotopes in a sample of boron having average atomic mass of 10.8u?
   (b) Electronic configuration of an element is 2,8,7. What is the atomic number, name and symbol of element?

2. (a) Compare the properties of electrons, protons and neutrons
   (b) The nucleus of an atom has 9 protons and 10 neutrons. What is the mass number, no. of valence electrons, valency, name and symbol of the element?

3. (a) An ion M^{3+} has 10 electrons and 14 neutrons. What is the atomic number and mass number of atom M?
   (b) What are the 2 observations and their conclusions made by Rutherford alpha-particle scattering experiment?

Assertion-Reason Questions

These consists of two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate options given below:

a) Both A and R are true, and R is the correct explanation of A.
b) Both A and R are true, but R is not the correct explanation of A.
c) A is true, but R is false.
d) A is false, but R is true.

1. Assertion (A): Thomson's atom model is known as 'Raisin Pudding'

Reason (R): The atom is visualized as a pudding of positive charge with electrons (raisins) embedded in it

2. Assertion (A): Most of the space in an atom is empty.
Reason (R): Most of the alpha-rays in Rutherford's alpha-scattering experiment passed through a thin gold foil straight.

3. Assertion (A): The distribution of electrons in different orbits or shells is governed by a scheme know Bohr-Bury scheme.
Reason (R): Electrons are filled in the shells in a stepwise manner.

4. Assertion (A): The size of nucleus is very small as compared to the size of the atom
Reason (R): The electrons revolve around the nucleus of the atom in circular paths.

Case Based Questions

1. Read the given passage and answer the questions based on the passage and related study concepts.

Study the table related to distribution of electrons, neutrons and, protons in 6 atoms/ions (A to F) and answer the questions that follow:

Atoms /Ions	Number of electrons	Number of neutrons	Number of protons
A	4	4	3
B	10	12	11
C	17	18	17
D	17	20	17
E	18	22	18
F	19	21	19

(a) Find a pair of ions.
(b) Find an atom of a noble gas.
(c) Find a pair of isobars.
(d) Find a pair of isotopes.
(e) Which atom/ion have valency 1?

INTERNATIONAL INDIAN SCHOOL DAMMAM

cLASS –IX BIOLOGY WORKSHEET 2024-25

L-6 ANIMAL TISSUES

I.MULTIPLE CHOICE QUESTIONS

1. The tissue present in the lining of kidney tubules and ducts of salivary glands is

(a) squamous epithelium tissue

(b) glandular epithelium tissue

(c) cuboidal epithelium tissue

(d) columnar epithelium tissue

2. Involuntary muscles are found in which of the following

(a) alimentary canal

(b) iris of the eye

(c) bronchi of lungs

(d) All the above

3. Which of the following tissue smoothens the bone surfaces at the joints.

a) Ligament
b) Aerolar tissue
c) Cartilage
d) Adipose tissue

4. Fats are stored in human body in which of the following

(a) Cuboidal epithelium

(b) Adipose tissue

(c) Bones

(d) Cartilage

5. Which of the following helps in repair of tissue and fills up space inside the organs ?

a) Cartilage
b) Tendon
c) Adipose tissue
d) Aerolar tissue

6. A person met with an accident in which two long bones of hand were dislocated. Which among the following may be possible reason?

(a) tendon break

(b) break of skeletal muscles

(c) ligament break

(d) Areolar tissue breaks

7. A long tubular outgrowth of a nerve cell which conducts impulses away from the cell body is termed as
(a) cyton

(b) axon

(c) Neuron

(d) dendrite

8. Intestine absorbs the digested food materials. What type of epithelial are responsible for that?
(a) Stratified squamous epithelium

(b) columnar epithelium

(c) squamous epithelium

(d) Cuboidal epithelium

II.ASSERTION REASONING QUESTIONS:

The following questions consist of two statements-Assertion(A) and Reason(R)
Answer these questions selecting the 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 but R is not the correct explanation of A**
c) **A is true but R is false**
d) **A is false but R is true**

9. Assertion : The skin which protect our body is made of stratified squamous epithelium.

Reason : The cells of this epithelium are arranged in layers to prevent wear and tear.

10. Assertion : Ciliated epithelium helps in movement of particles.
Reason : Cilia help in movement

11. Assertion : Thigh muscles can get tired but not heart muscles

Reason: Muscles of thigh are voluntary while muscles of heart are involuntary muscles.

12. Assertion : The inner lining of intestine has tall epithelial cells.
Reason : Columnar epithelium facilitates absorption and secretion

13. Assertion : the dendrites and axons are special features of nervous tissue cells.

Reason : They help in rapid conduction of nerve impulses.

II.SHORT AND LONG ANSWER QUESTIONS

14. Differentiate between tendons and ligaments.

15. State the function of blood and bone.

16. What is ciliated columnar epithelium? What is the function of ciliated columnar epithelium?

17. (i) What is the lining of blood vessels made up?
(ii) What is the lining of small intestine made up of?

18. Differentiate between cartilage and bone.

19. Describe the structure, function and location of the nervous tissue.

20. Differentiate between unstriated muscle, cardiac muscle and striated muscle on the basis of their shape, location, and function.

21. Draw labelled diagram of three different types of muscles.

22. Name the following:

(a) Tissue that forms the inner lining of our mouth.

(b) Tissue that connects muscle to bone in humans.

(d) Tissue that stores fat in our body.

(e) Connective tissue with a fluid matrix.

(f) Tissue present in the lung alveoli

23. Describe the structure and function of different types of epithelial tissues. Draw the diagram for each type of epithelium.

24. Describe the types of connective tissues along with their functions.

25. Describe the structure of neuron with the help of a neat labelled diagram.

III. CASE STUDY

Connective tissue is specialised to connect various body with each other, for example it connects two or more bones to each other, muscles to bones, bind different tissues together and also gives support to various parts of the body. The cells of connective tissue are loosely packed, living and embedded in an intercellular matrix that may either be jelly like fluid, dense or rigid in nature. The nature of matrix differs in concordance with the function of the particular connective tissue. The various types of the connective tissue are blood, bones, ligaments, tendons, cartilage, areolar tissue and adipose tissue.

A. How are the cells of connective tissues spaced?
B. What type of matrix is found in the cartilage?
C. Differentiate between ligament and tendons.

OR

Write any two functions of cartilage

L-15 IMPROVEMENT IN FOOD RESOURCES

I.MULTIPLE CHOICE QUESTIONS

1. Find out the wrong statement from the following.

(a) White revolution is meant for increase in milk production

(b) Blue revolution is meant for increase in fish production

(c) Increasing food production without compromising with environmental quality is called as sustainable agriculture

(d) None of the above

2. Find out the correct sentence.

(i)Hybridisation means crossing between genetically dissimilar plants

(ii) Cross between two varieties is called as inter specific hybridisation

(iii) Introducing genes of desired character into a plant gives genetically modified crop

(iv)Cross between plants of two species is called as inter varietal hybridisation

(a) (i) and (iii)

(b) (ii) and (iv)
(c) (ii) and (iii)
(d) (iii) and (iv)

3. Weeds affect the crop plants by:

(a) Killing of plants in field before they grow.

(b) Dominating the plants to grow.

(c) Competing for various resources of crops (plants) causing low availability of nutrients.

(d) all of the above

4. Cattle husbandry is done for the following purposes:

(i) Milk Production

(ii) Agricultural work

(iii) Meat production

Iv) Egg production

(a) (i), (ii) and (iii)

(b) (ii), (iii) and (iv)

(c) (iii) and (iv)

(d) (i) and (iv)

5. Poultry fowl are susceptible to the following pathogens

(a) Viruses

(b) Bacteria

(c) Fungi

(d) All of the above

6 Which of the following refers to seed in fisheries?

(a) Fish
(b) Eggs of fish
(c) Feeders
(d) Larva

7 Growing two or more crops in definite row pattern is called

(a) Crop rotation

(b) Mixed cropping

(c) Intra-cropping

(d) Inter-cropping

ASSERTION REASONING QUESTIONS:

a) Both Assertion and Reason are correct, and reason is the correct explanation for assertion.
b) Both Assertion and Reason are correct, and Reason is not the correct explanation for Assertion.
c) Assertion is true but Reason is false.
d) Both Assertion and Reason are false.

8 Assertion: manure maintain fertility of soil.

Reason: Manure is made up of inorganic matter.

9 Assertion: Removal of weeds from cultivated fields during the early stages of crop growth is essential for good harvest.

Reason: weeds takes nutrients from soil and reduces the growth of crop.

II SHORT AND LONG ANSWER QUESTIONS

10 What are the desirable agronomic characteristics for crop improvement?

11 Compare the use of manure and fertilisers in maintaining soil fertility.

12 What are the advantages of inter-cropping and crop rotation?

13 What factors may be responsible for losses of grains during storage?

14 Write the modes by which insects affect the crop yield.

15 What are the differences between broilers and layers and in their management?

16 An Italian bee variety A. mellifera has been introduced in India for honey production. Write about its merits over other varieties.

17 What do you understand by composite fish culture?

III CASE STUDY

Different crops require different climatic conditions, temperature and photoperiods for their growth and completion of their life cycle. Photoperiods are related to the duration of sunlight. Growth of plants and flowering are dependent on sunlight. As we all know, plants manufacture their food in sunlight by the process of photosynthesis. There are some crops, which are grown in rainy season, called the kharif season from the month of June to October, and some of the crops are grown in the winter season, called the Rabi season from November to April. Paddy, soyabean, pigeon pea, maize, cotton, green gram and black gram are kharif crops, whereas wheat, gram, peas, mustard, linseed are Rabi crops.

18 What is kharif season period?

19 What is Rabi season period?

20 List any two abiotic factors that affect the growth and completion of life cycle of the crops.