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SCIENCE – Code no.086

TERM TEST – I

CLASS – IX (2025-26)

Max. Marks : 80

Time Allowed:3hours

General Instructions:

- This question paper consists of 39 questions in 3 sections.
- Section A is Biology, Section B is Chemistry and Section C is Physics.
- All questions are compulsory. However, an internal choice is provided in some questions. A student is expected to attempt only one of these questions.

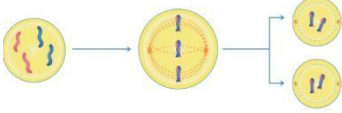
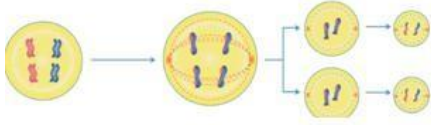
Section–A <i>Biology</i>		Marks
1	The apical meristem is responsible for growth in ? a) Growth in tip of stem b) Growth in Girth of plant c) Production of flowers d) None of the above	1
2	Which tissue makes up husk of a coconut? a) Collenchyma b) Sclerenchyma c) Parenchyma d) Phloem	1
3	Cardiac muscles are found in: a) Hands b) Heart c) Stomach d) Intestine	1
4	Which plastid is responsible for photosynthesis? a) Chromoplast b) Leucoplast c) Chloroplast d) Amyloplast	1
5	Which of these is absent in animal cells but present in plant cells? a) Mitochondria b) Vacuole c) Cell wall d) Ribosome	1
6	Which of the following helps in exchange of gases ? a) xylem b) phloem c) stomata	1

	d) Xylem	
7	Guard cells are specialized cells found in: a) Phloem b) Epidermis of leaves c) Xylem vessels d) Cork	1

The following question consists of two statements – **Assertion** (A) and **Reason** (R). Answer these questions by 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, 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.

8	Assertion (A): The plasma membrane is semi permeable. Reason (R): It allows substances to pass through without any hindrance.	1
9	Assertion (A): Muscle tissue helps in movement of the body. Reason (R): Muscles can contract and relax.	1
10	What happens to a cell when placed in [A] Hypotonic solution [B] Hypertonic solution	2
11	Write the differences between meristematic tissue and permanent tissue. OR Write the differences between LIGAMENT AND TENDON	2
12	State the functions of epidermis in plants.	2

13	Draw and explain the composition of animal cell?	3
14	<div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>[A]</p> </div> <div style="text-align: center;">  <p>[B]</p> </div> </div> <p>[i] Name the type of cell division in figure [A] ?</p> <p>[ii] which cell division is called equational division ?</p> <p>[iii] In diagram [B] what is the number of chromosomes in parent cell and daughter cell [in humans]?</p>	3

15	<p>A student observed plant cells under a microscope. He noted a rigid boundary, a large central vacuole, green dots in the cytoplasm, and a prominent nucleus.</p> <p>Questions:</p> <p>a) Name the rigid boundary seen in these cells.</p> <p>b) What are the green dots and what is their function?</p> <p>c) How is the central vacuole useful for the plant?</p> <p>d) Which stain is used to highlight the cell wall in onion peel cells</p>	4
16	<p>With a neat labeled diagram, Describe the different types of plant meristematic tissue with location and function.</p> <p style="text-align: center;">OR</p> <p>Explain the different types of connective tissue in animals with their functions.</p>	5
Section – B Chemistry		
17	<p>When ice melts, the temperature remains constant until all ice becomes water. This is because:</p> <p>a) Heat is used to break bonds between water molecules</p> <p>b) Heat increases kinetic energy</p> <p>c) Heat evaporates water immediately</p> <p>d) Heat is absorbed by surrounding</p>	1
18	<p>Which among the following is a suspension?</p> <p>a) Salt solution</p> <p>b) Milk</p> <p>c) Muddy water</p> <p>d) Sugar solution</p>	1
19	<p>Which of the following shows the property of diffusion in gases?</p> <p>a) Smell of perfume spreading in a room</p> <p>b) Ice melting in water</p> <p>c) Salt dissolving in water</p> <p>d) Oil floating on water</p>	1
20	<p>Identify the homogeneous mixture:</p> <p>a) Air</p> <p>b) Soil</p> <p>c) Oil and water</p> <p>d) Sand and salt</p>	1
21	<p>Latent heat of fusion is:</p> <p>a) Heat required to convert solid into liquid at melting point</p> <p>b) Heat required to raise temperature of 1 kg water by 1°C</p> <p>c) Heat released during condensation of steam</p> <p>d) Heat required to convert vapour into liquid</p>	1

22	Which among the following is a pure substance? a) Soda water b) Gold c) Milk d) Air	1
23	The conversion of solid directly into gas is called: a) Sublimation b) Evaporation c) Condensation d) Fusion	1

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24	Assertion (A): Evaporation occurs from the surface of a liquid. Reason (R): Particles with higher kinetic energy escape from the liquid.	1
25	Which will produce more heat and why when cooled to room temperature: 100 g of boiling water at 100°C or 100 g of steam at 100°C?	2
26	A Solution contains 40 grams of common salt in 320 grams of water. Calculate concentration of solution in terms of mass-by-mass percentage of the solution. OR Why do we observe the Tyndall effect in a colloidal solution but not in a true solution? Explain with examples of true solution and a colloid.	3
27	Give reasons: a) Gas fills the entire vessel in which it is kept. b) We can smell hot food from a distance more easily than cold food. c) Why do water droplets appear on the outer surface of metallic pot having ice cold water?	3
28.	Read the passage and answer the following: A student dissolved a small amount of sugar in water. He then added more water and noticed the solution remained sweet and uniform. He repeated the experiment with a few grains of sand, and it settled at the bottom. Answer the following: a. What does this experiment tells about sugar in water? b. Explain the difference between sugar in water and sand in water based on stability and filtration. OR	4 (1+2+1)

34	<p><u>Attempt either option A or B.</u></p> <p>A. Which would require a greater force - accelerating a 2 kg mass at 5 m/s^2 or a 6 kg mass at 2 m/s^2?</p> <p style="text-align: center;">OR</p> <p>B. A force of 15N acts for 5s on a body of mass 5g which is initially at rest. Calculate the final velocity of the body.</p>	2
35	Write the difference between mass and weight (any two). How does the gravitational force affect the weight of an object on different celestial bodies?	2+1

36	<p>A ball is thrown upwards with an initial velocity of 20 m/s. Assuming the acceleration due to gravity is 10 m/s^2, calculate:</p> <ol style="list-style-type: none"> The time taken by the ball to reach its maximum height. The maximum height reached by the ball. The velocity of the ball when it returns to the ground. 	3
37	Calculate the gravitational force between two objects of mass 10 kg and 20 kg separated by a distance of 5 m.	3
38	<p>A force is a push or a pull that acts upon an object as a result of its interaction with another object. Forces result from interactions! some forces result from <i>contact interactions</i> (normal, frictional, tensional, and applied forces are examples of contact forces) and other forces are the result of action-at-a-distance interactions (gravitational, electrical, and magnetic forces). According to Newton, whenever objects A and B interact with each other, they exert forces upon each other. When you sit in your chair, your body exerts a downward force on the chair and the chair exerts an upward force on your body. There are two forces resulting from this interaction - a force on the chair and a force on your body. These two forces are called <i>action</i> and <i>reaction</i> forces and are the subject of Newton's third law of motion.</p> <p>A. According to the third law of motion, action and reaction</p> <ol style="list-style-type: none"> always acts on the same body always acts on different bodies in opposite directions have same magnitude and directions act on either body at normal to each other <p>B. The forward movement in swimming takes place because of</p> <ol style="list-style-type: none"> Third law of motion Fourth law of motion Second law of motion First law of motion <p>C. A horse pulling a tanga moves forward due to____</p>	4

- i. The horse on the ground with his feet
- ii. The horse on the tanga
- iii. The ground on the horse's feet
- iv. The tanga on the horse

Attempt either subpart D or E

D. When a force is exerted on the object, it can change its

- i. State
- ii. Position
- iii. shape
- iv. all the above

OR

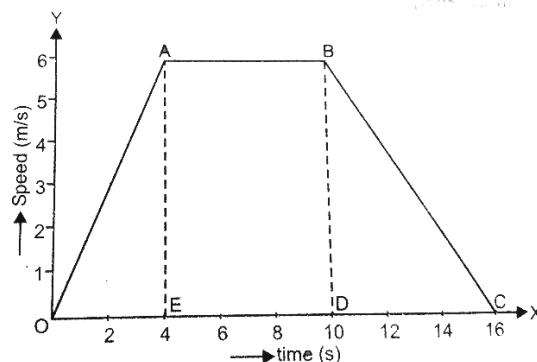
E. The action and reaction referred to in third law

- i. Must act on different objects
- ii. must act on the same object
- iii. May act on different objects
- iv. Need not be equal in magnitude but act in the same direction

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Attempt either option A or B.

A. Study the speed time graph of a body shown in Figure. and answer the following questions:



- (a) What type of motion is represented by OA?
- (b) What type of motion is represented by AB?
- (c) What type of motion is represented by BC?
- (d) Find out acceleration of the body from O to A.
- (e) Find out retardation of the body.

OR

B. A car is moving at a constant speed of 40 km/h on a straight road

a. What type of motion is the car experiencing?

- i. Uniform motion
- ii. Non-uniform motion
- iii. Circular motion
- iv. Oscillatory motion

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b. If the car's speed increases to 60 km/h, what happens to its velocity?

- i. It remains the same
- ii. It increases
- iii. It decreases
- iv. It becomes zero

c. What is the car's acceleration if its speed remains constant?

- i. Positive
- ii. Negative
- iii. Zero
- iv. Increasing

d. How can you calculate the distance traveled by the car in 2 hours?

- i. Distance = Speed \times Time
- ii. Distance = Speed / Time
- iii. Distance = Time / Speed
- iv. Distance = Speed + Time

e. What is the unit of speed?

- i. m/s
- ii. km/h
- iii. m/h
- iv. km/s
