

A.P.BOARD

(Internal) Examination- 2025-26

Subject : Science

Class: IX (Nine)

Time Allowed: 3 hours

Full Marks: 80

General Instructions:

- I. This question paper consists of **41** questions in **5** sections.
- II. All questions are compulsory. However, an internal choice is provided in some questions.
- III. **Section A** consists of **20** objective type questions carrying **1** mark each.
- IV. **Section B** consists of **10** Very Short questions carrying **02** marks each.
- V. **Section C** consists of **6** Short Answer type questions carrying **03** marks each.
- VI. **Section D** consists of **3** Long Answer type questions carrying **04** marks each.
- VII. **Section E** consists of **2** source-based/case-based units of assessment of **05** marks.

Section - A (1 Mark Each)

1. Vertical growth in plants takes place by -
(a) Lateral meristem (b) apical meristem
(c) Intercalary meristem (d) none of the above
2. Cartilage is not found in
(a) nose (b) kidney (c) ear (d) larynx
3. What is the weight of a body at the earth's centre?
(a) zero
(b) same as on the surface of the earth
(c) less than the weight on the surface of earth
(d) none of the above
4. The law of gravitation describes the gravitational force between
(a) any two bodies having mass (b) earth and point mass only
(c) earth and Sun only (d) two charged bodies only
5. Select the correct statement from the following:
(a) Sublimation is the conversion of solids into vapours without going through the liquid.
(b) Vaporisation is the conversion of vapours to solid without going through the liquid state.
(c) The conversion of vapours to solid without passing through the liquid is known as freezing.
(d) Sublimation is the conversion of solid to liquid.
6. One atomic mass unit is a mass unit equal to exactly one twelfth (1/12th) the mass of

- one atom of _____
- (a) Carbon-12 (b) Nitrogen -14 (c) Carbon-1 (d) Silicon-14
7. An alpha particle is also known as _____
- (a) subatomic particle (b) a helium atom
(c) a neutral particle (d) a doubly-charged helium ion
8. What does the slope of a velocity-time graph give?
- (a) Distance (b) Displacement (c) Acceleration (d) Change in velocity
9. The conducting elements of xylem are
- a) Trachieds & Vessels b) trachieds
(c) vessels (d) tracheids, vessels and xylem vessels
10. What is blue revolution?
- a) increase in production of fish (b) increasing production of eggs
(c) increasing production of milk (d) increased availability of honey
11. Plant tissue which has guard cells present in it is a
- a) epidermis (b) parenchyma (c) xylem (d) sclerenchyma
12. Which of the following can be called a suspension?
- a) milk (b) milk of magnesia (c) salt solution (d) vinegar
13. The law of conservation of mass was given by
- a) Dalton (b) Proust (c) Lavoisier (d) Berzelius
14. The formula of a compound is X_3Y . The valencies of elements X and Y will be respectively:
- a) 1 and 3 (b) 3 and 1 (c) 2 and 3 (d) 3 and 2
15. Water stored in a dam possesses
- a) no energy (b) electrical energy (c) kinetic energy (d) potential energy
16. The sound waves travels fastest in :
- a) solids (b) liquids (c) gases (d) vacuum

Question No. 17 to 20 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, 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.
17. **Assertion (A)** : Epidermis protects the interior from microbes, injury, and loss of water.
Reason (R) : It is a continuous layer covered with cuticle.

18. **Assertion (A)** : The karate player is able to break a pile of tiles with a mighty blow of hand because he strikes the tiles with his hand very fast producing an extremely large velocity.
Reason (R) : If there were no air resistance and no friction, a moving bicycle would go on moving forever without stopping
19. **Assertion (A)**: The two important characteristics of metals are malleability and ductility.
Reason (R): The property which allows metals to be drawn into thin wires is called malleability. On the other hand, the property which allows the metals to be hammered into thin sheets is called ductility.
20. **Assertion (A)**: Lactation period is the period before birth to of a calf.
Reason (R): There is maximum milk production during lactation period.

Section - B (2 marks)

Question No. 21 to 30 are very short answer questions

21. Why does our palm feel cold when we put on some acetone or petrol, or perfume on it?
22. Define law of conservation of mass
23. Can you name the two organelles we have studied that contain their own genetic material?
24. Why are lysosomes known as suicide bags?
25. What are the constituents of phloem?
26. Define 1 newton force.
27. What does the odometer of an automobile measure?
28. Name the physical quantity whose SI unit is : a) m/s b) m/s^2
29. What is the name of element which has 18 electrons, 18 neutrons and 17 protons in it?
30. Give two limitations of using manure?

Section-C (3 marks)

Question No. 31 to 36 are short answer questions

31. Who discovered cells and how?
32. What is a colloid? What are its various properties?
33. Differentiate between parenchyma, collenchyma and sclerenchyma on the basis of their cell wall.
34. An electric heater uses 600kj of electrical energy in 5minutes. Calculate its power rating.
35. When do we say that work is done? Write an expression for work done.
36. The molecular formula of glucose is $C_6H_{12}O_6$. Calculate its molecular mass.
(atomic masses: C = 12u; H = 1u; O = 16u)

Section-D (4 marks)

Question No. 37 to 39 are long answer questions

37. a) State and explain Newton's second law of motion,

AP Board Examination
Marking Scheme (2025-26)
Class-IX Science

Q.No.	Answer	Marks
1	b	1
2	b	1
3	a	1
4	a	1
5	a	1
6	a	1
7	b	1
8	c	1
9	a	1
10	a	1
11	a	1
12	b	1
13	c	1
14	a	1
15	d	1
16	a	1
17	a	1
18	b	1
19	c	1
20	d	1
See -A		
See -B		
21	Acetone, petrol, and perfume are volatile substances that evaporate when they come in contact with air. Evaporation is facilitated as it uses energy from the palm, hence leaving a cooling effect on our palms.	2
22.	It states that, 'Mass is neither created nor destroyed in a chemical reaction.' In other words, the mass of the reactants must be equal to the mass of products.	2
23	Mitochondria and Plastids	2
24	Lysosomes are organelles inside cells that contain hydrolytic (digestive) enzymes. When a cell is injured, its lysosomes may burst, allowing enzymes to digest the cell itself. As a result, we can call lysosomes "suicide bags."	2
25	The constituents of phloem are: sieve tubes, companion cells, phloem parenchyma, phloem fibres(bast).	2
26	1 newton is the magnitude of force which produces an acceleration of 1 m/s^2 in a body of mass 1 kg. $1\text{Newton} = 1\text{kg} \times 1\text{m/s}^2$ $1\text{Newton} = 1\text{kg} \times 1\text{m/s}^2$	2

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- 27 An odometer, or odograph, is a device that measures the distance travelled by an automobile based on the perimeter of the wheel as the wheel rotates. 2
- 28 a) velocity/ speed b) acceleration 2
- 29 The element is Chlorine ion. No of protons denote atomic no. It has gained one electron to form chlorine ion. 2
- 30 It is less rich in nutrients. it may lead to the spreading of some harmful bacteria 2
- See - C**
- 31 The dead cells were first discovered by Robert Hooke in 1665. He observed in cork cells that the cells are like honeycomb structures with the help of a basic microscope while the living cells were first discovered by Antoine van Leuwenhoek after the discovery of the electron microscope 3
32. The heterogeneous mixture of substances are colloids, in which the particle size is too small and cannot be seen by naked eyes. E.g. Milk, hairspray, fog etc. 3
- (1) It is a heterogeneous mixture but appears homogeneous. 3
- (2) The size of particles is too small so cannot be seen by naked eyes.
- (3) They make its path visible by scattering the beam of light passing through it.
33. Parenchyma: Cell wall is thin made up of cellulose. 3
- Collenchyma : Cell wall is thick at corners made up of pectin and Sclerenchyma : Cell wall is thick made up of lignin, cellulose.
34. Amt of energy used = 600kj time taken - 5min = 1/12 hr 3
- Power = 600 /12 x 1 = 50kw
35. Work is completed whenever the given conditions are satisfied: (i) A force acts on the body. (ii) There's a displacement of the body by applying force in or opposite to the direction of the force. 2+1
- Work done = Force x Displacement
- 36 6x 12+ 12x 1 +6x 16= 180u 3
- See-D**
- a) Newton's 2nd law of motion states that the rate of change of momentum of a body is directly proportional to the applied force, and takes place in the direction in which the force acts. 2
- b) i) $a = -4m/s^2$ ii) -4000N 2
- 38 a) Robert Hooke 2
- b)

Plant Cell	Animal Cell
Has a cell wall	Cell wall is absent
Large vacuole	Small vacuole
Chloroplast present	Chloroplast absent

 2
- 39 a) 26g b) 256g c) 124g d) 36.5g 1x4= 4
- or
- An atom holds the nucleus at the centre. • Negatively charged electrons revolve around the nucleus. • The atoms in it contain distinct orbits of electrons. • Electrons do not radiate energy when they are in their orbits. •

The distinct orbits are named K, L, M, and N orbits. Numbers used to denote them are $n=1, 2, 3, 4$

Sec-E

- | | | | |
|----|----|---|---|
| 40 | a) | i) X = Ultrasonic sound ii) Y = Infrasonic sound
iii) Z = Audible sound | 1 |
| | b) | Ultrasound scanner | 1 |
| | c) | Vibrating Simple Pendulum | 1 |
| | d) | Sound of washing machine working or Whistle of pressure cooker. | 1 |
| | e) | Between 20hz to 20000hz | 1 |
| 41 | a) | Rate of evaporation is directly proportional to wind speed. | 1 |
| | b) | Acetone, petrol, and perfume are volatile substances that evaporate when they come in contact with air. Evaporation is facilitated as it uses energy from the palm, hence leaving a cooling effect on our palms. | 1 |
| | c) | Rate of evaporation is inversely proportional to humidity. Hence more the humidity lesser the rate of evaporation. | 1 |
| | d) | Removes excess heat and stabilizes body temperature. | 1 |
| | e) | In summer, it is preferred to wear light-coloured cotton clothes because light colour reflects heat and cotton materials have pores that absorb sweat, facilitating evaporation, and hence causing a cooling effect on the skin . | 1 |