CBSE EXAMINATION PAPER-2026

SCIENCE

(Solved)

Time allowed : 3 hours | Maximum Marks : 90

General Instructions :

Read the following instructions carefully and follow them :

i. This question paper contains **45 questions.** All questions are **compulsory.**

ii. This question paper is divided into **5 sections.**

iii. **Section A** – questions number **1 to 3** are case based questions

iv. **Section B** – questions number **4 to 23** are multiple choice questions

v. **Section C** – questions number **24 to 31** are very short answer

vi. **Section D** – questions number **32 to 39** are short answer

vii. **Section E** – questions number **40 to 45** are long answer

viii. There is no overall choice given in the question paper. However, an internal choice has been provided in few questions.

ix. Use of calculator is NOT allowed.

Section A

Question 1. Mendel took garden pea plants with different characteristics, such as height to study the inheritance pattern of factors (genes). He crossed tall pea plant with short pea plant and obtained all the tall plants in the F_1 generation.

> **(1) Why only tall pea plants were observed in F_1 progeny?**
>
> [1 Marks]

(2) By which method did Mendel obtain F_2 progeny?

[1 Marks]

(3) Write one difference between dominant and recessive trait.

[2 Marks]

Question 2.

Read the following passage and answer the questions given below :

Most of metals occur in combined state in form of ores. Carbonate ores are converted into oxides by calcination and sulphide ores by roasting. Oxides are reduced with suitable reducing agent like carbon to get free metal. Highly reactive metals like – Al, Mg are also used as reducing agents to obtain metal from their oxides. Most reactive metals are obtained by electrolytic reduction of their molten ores. Alloying is a very good method of improving the properties of a metal. We can get desired properties by this method. The electrical conductivity and melting point of an alloy is less than that of pure metals.

(1) Why carbonate or sulphide ores are converted into oxides before extraction of metal from it ?

[1 Marks]

(2) Write a reaction in which Aluminium is used as a reducing agent to obtain metal from its oxide.

[1 Marks]

(3) How is copper obtained from its ore (Cu_2S) ? Give equations of the reactions.

[2 Marks]

Question 3.

Read the following passage and answer the questions given :

Lenses can form different types of images depending upon their focal length and position of object. A convex lens can create real, inverted or virtual, erect images, while a concave lens forms only virtual and diminished images. The focal length determines the power of lens. Convex lenses have positive focal length while concave lenses have negative focal length by convention. When lenses are placed together, their combined power is determined by the sum of their individual powers. Ray diagrams help to visualize how light converges or diverges through lens to form an image.

(1) Illustrate the formation of image with the help of ray diagram, when the object is placed between the optical centre and principal focus of concave lens.

[1 Marks]

(2) A convex lens of focal length 20 cm is used to form an image. If an object is placed at 40 cm from the lens, what will be the position and nature of image ?

[1 Marks]

(3) Two lenses are placed in contact. One is a concave lens with focal length 2 m and the other is a convex lens with focal length 1.5 m. What type of lens will the combination behave as (convex or concave) ? Give reason.

[1 Marks]

(4) A lens combination consists of a convex lens of focal length 30 cm and a concave lens of focal length 15 cm placed together. Find the equivalent focal length and power of this lens combination.

[1 Marks]

Section B

Question 4.

Which structure in a leaf is mainly responsible for gaseous exchange?

[1 Marks]

(A) Cuticle

(B) Phloem

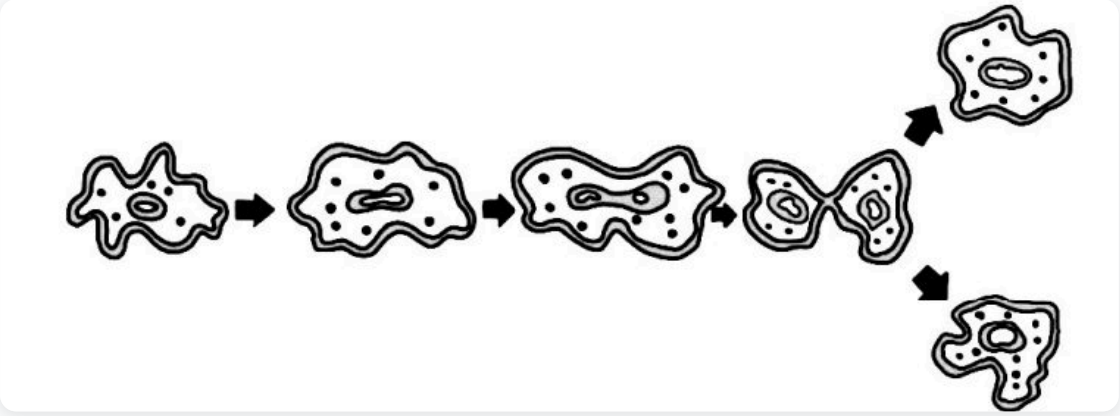
(C) Stomata

(D) Xylem

Question 5.

Identify the type of reproduction shown in the diagram given below:

[1 Marks]



(A) Spore Formation

(B) Budding

(C) Fragmentation

(D) Binary Fission

Question 6.

Identify the correct statement for Spirogyra, Leishmania and Hydra:

[1 Marks]

(A) they reproduce sexually.

(B) they are unicellular.

(C) they are multicellular.

(D) they reproduce asexually.

Question 7. Human brain has various parts or regions that help in different actions, responses and coordination. From the following, identify the part responsible for precision of voluntary actions:

[1 Marks]

(A) Cerebrum

(B) Medulla

(C) Cerebellum

(D) Pons

Question 8.

Pancreas secretes pancreatic juice which contain certain enzyme that helps in digestion of food. Choose the correct option from the following:

[1 Marks]

(A) Trypsin and lipase both digests fats.

(B) Trypsin digests emulsified fats and lipase digests proteins.

(C) Trypsin digests proteins and lipase digests emulsified fats.

(D) Trypsin digests proteins and lipase digests carbohydrates.

Question 9.

Sex is determined by different factors in various species. However, in human beings, it is determined genetically. Which amongst the following option(s) is/are correct for human beings?

(i) Gamete carrying X chromosome from female parent.

(ii) Gamete carrying X chromosome from male parent.

(iii) Gamete carrying Y chromosome from male parent.

[1 Marks]

(A) (ii) and (iii)

(B) (i) only

(C) (i) and (iii)

(D) (iii) only

Question 10.

Which of the following group is not 'biodegradable'?

[1 Marks]

(A) Polythene bag, rubber band, ball pen

(B) Vegetable peels, dead leaves, paper

(C) Cow dung, leather bag, water

(D) Paper, fruits, bones

Question 11.

Two statements are given, one labelled as Assertion (A) and the other is labelled as Reason (R). Select the correct answer to these questions from the codes (A), (B), (C) and (D) as given below :

Assertion (A): Reflex actions do not involve thinking.

Reason (R): Most reflex actions are controlled by the spinal cord.

[1 Marks]

(A) Assertion (A) is true, but Reason (R) is false.

(B) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of the Assertion (A).

(C) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).

(D) Assertion (A) is false, but Reason (R) is true.

Question 12.

Two statements are given, one labelled as Assertion (A) and the other is labelled as Reason (R). Select the correct answer to these questions from the codes (A), (B), (C) and (D) as given below :

Assertion (A): In human beings, the respiratory pigment is haemoglobin present in red blood cells.
Reason (R): Haemoglobin has a very high affinity for carbon dioxide.

[1 Marks]

(A) Assertion (A) is false, but Reason (R) is true.

(B) Assertion (A) is true, but Reason (R) is false.

(C) Both Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A).

(D) Both Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of the Assertion (A).

Question 13.

(i) $AgNO_3 + NaCl \rightarrow NaNO_3 + AgCl$

(ii) $K_2SO_4 + BaCl_2 \rightarrow BaSO_4 + 2KCl$

Which of the following options clearly describes both the reactions?

[1 Marks]

(A) (i) is double displacement, (ii) is displacement reaction.

(B) Both, (i) and (ii) are double displacement reactions and precipitation reactions.

(C) (i) is displacement, (ii) is double displacement reaction.

(D) Both, (i) and (ii) are displacement reactions and precipitation reactions.

Question 14.

Which one of the following can be used as an acid-base indicator by a visually impaired (blind) student ?

[1 Marks]

(A) Litmus

(B) Methyl orange

(C) Vanilla essence

(D) Turmeric

Question 15.

The gases evolved on heating lead (II) nitrate crystals are :

[1 Marks]

(A) NO_2 and O_2

(B) NO_2 and H_2

(C) NO and O_2

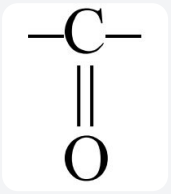
(D) N_2 and NO_2

Question 16.

The formula of functional group for aldehyde is :

[1 Marks]

(A)



(B)

$-CHO$

(C)

$-COOH$

(D)

$-OH$

Question 17. Which of the following is a poor conductor of electricity ?

[1 Marks]

(A) Pb

(B) Cu

(C) Ag

(D) Al

Question 18. The natural sources of oxalic acid, lactic acid and methanoic acid respectively are :

[1 Marks]

(A) tomato, curd, ant-sting

(B) tomato, orange, nettle-sting

(C) orange, milk, ant-sting

(D) orange, sour milk, nettle-sting

Question 19.

When an element ‘X’ reacts with water, it starts floating. Identify the element ‘X’ :

[1 Marks]

(A) Calcium

(B) Potassium

(C) Sodium

(D) Iron

Question 20.

Two statements are given, one labelled asAssertion (A) and the other as labelled as Reason (R). Select the correct answer to these questions from the codes (A), (B), (C) and (D) as given below :

Assertion (A) : Carbon shares its valence electrons with other atoms of carbon or with atoms of other elements.

Reason (R) : The shared electrons belong to the outermost shells of both the atoms and lead to both atoms attaining the noble gas configuration.

[1 Marks]

(A) Assertion (A) is true, but Reason (R) is false.

(B) Both, Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of the Assertion (A)

(C) Assertion (A) is false, but Reason (R) is true.

(D) Both, Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of the Assertion (A).

Question 21.

A convex lens of focal length 15 cm, is forming a real image. If the size of image is same as the size of object, then position of object and position of image will be, respectively :

[1 Marks]

(A) –15 cm and –15 cm from lens

(B) –15 cm and +15 cm from lens

(C) –30 cm and +30 cm from lens

(D) –30 cm and –30 cm from lens

Question 22. When you look at an object very close to your eyes, the :

[1 Marks]

(A) Ciliary muscles of your eye contract and the eye lens becomes thick.

(B) Ciliary muscles of your eye get relaxed and the eye lens becomes thick.

(C) Ciliary muscles of your eye get relaxed and the eye lens becomes thin.

(D) Ciliary muscles of your eye contract and the eye lens becomes thin.

Question 23.

two statements are given, one labelled as Assertion (A) and the other as labelled as Reason (R). Select the correct answer to this question from the codes (A), (B), (C) and (D) as given below :

Assertion (A) : When rays of white light pass through a prism, on emerging they give spectrum of seven colours.

Reason (R) : It is due to the scattering of light that red light bends minimum and violet light bends the maximum.

[1 Marks]

(A) Both, Assertion (A) and Reason (R) are true, but Reason (R) is not the correct explanation of Assertion (A)

(B) Both, Assertion (A) and Reason (R) are true and Reason (R) is the correct explanation of the Assertion (A)

(C) Assertion (A) is true, but Reason (R) is false

(D) Assertion (A) is false, but Reason (R) is true.

Section C

Question 24.

What is the function of diaphragm in human respiratory system? Where is it present in human body?

[2 Marks]

Question 25.

State two differences between the act of chewing food and salivation on sight of food.

[2 Marks]

Question 26.

State two differences between pollination and fertilization.

[2 Marks]

Question 27.

Draw a neat diagram to show germination of pollen on the female reproductive part of the flower. Name and label only the following parts:

(a) The part that receives the pollen grain
(b) The structure that carries the male germ cell to reach the female germ cell

[2 Marks]

Question 28.

(a) What are amphoteric oxides ?

(b) Categorise the following based on their nature :
ZnO, Na_2O, CO_2

[2 Marks]

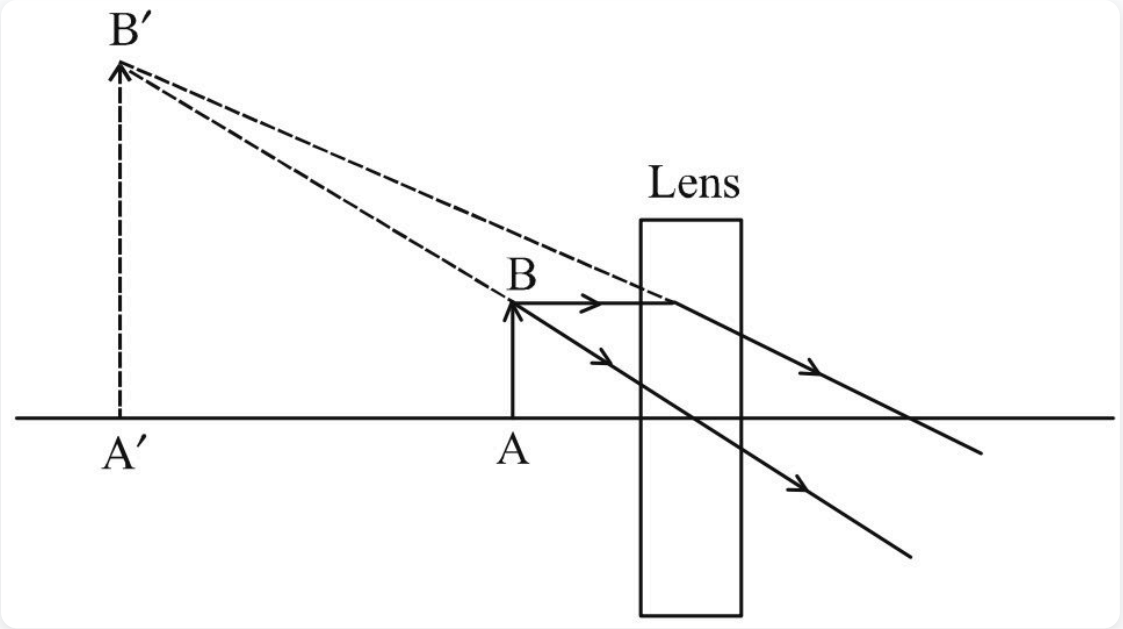
Question 29.

The given figure shows image formation by a lens. Analyse the figure and answer the following questions :

(a) What is the type of lens used for image formation in the given ray diagram ?

(b) If the real image is formed at a distance of 30 cm from the lens and the size of image is twice the size of the object, then where was the object placed ?

[2 Marks]



Question 30.

The resistance of a wire of 0.01 cm radius and 1.0 cm length is 7 Ω. Calculate its resistivity.

[2 Marks]

Question 31.

An electric heater is rated 220 V; 11 A. Calculate the power consumed if the heater is operated at 200 V.

[2 Marks]

Section D

Question 32.

Given below is a pyramid showing various trophic levels in an ecosystem.

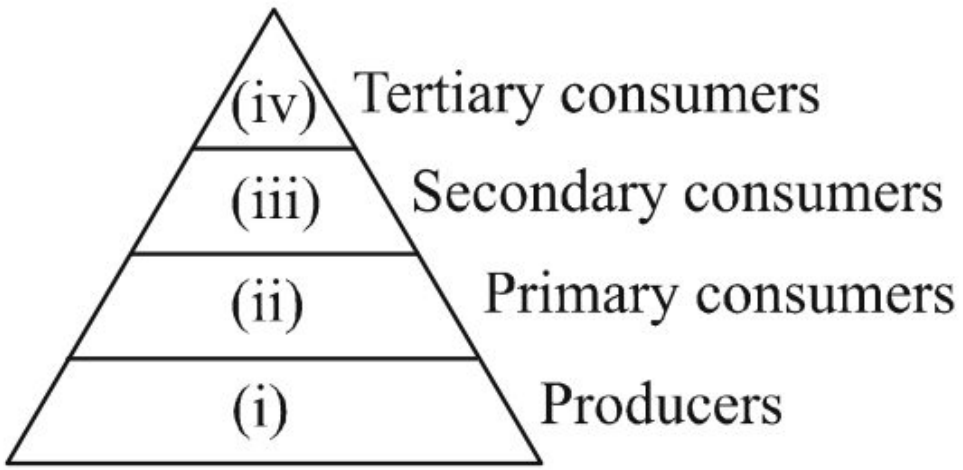
(a) From the organisms listed below, identify which one is to be placed at which trophic level?

Deer, Grass, Lion, Snake, Rabbit

(b) Discuss the reason why primary consumers will have more energy as compared to secondary consumers?

(c) Why is the base of the pyramid broad?

[3 Marks]



Question 33.

Give differences between the following:

(a) Nephron and neuron

(b) Sensory nerve and motor nerve

(c) Consumers and decomposers

[3 Marks]

Question 34.

(a) Name the substance oxidised and reduced in the following reaction :

$ZnO + C \rightarrow Zn + CO$

(b) Balance the following chemical reaction :

$Pb(NO_3)_2 + KI \rightarrow PbI_2 + KNO_3$

(c) Give one example each of electrolytic decomposition and decomposition by sunlight.

[3 Marks]

Question 35.

Explain chlor-alkali process with chemical equation. Name the products formed at anode and cathode.

[3 Marks]

Question 36.

Write the preparation of following compounds with balanced chemical equation :

(i) Baking soda

(ii) Bleaching powder

(iii) Plaster of Paris

[3 Marks]

Question 37.

A person is unable to read a book placed closer than 1 metre from his eyes. Identify the defect of vision in his eyes. Draw the ray diagrams to show the defect of vision and its correction.

[3 Marks]

Question 38.

(a) Describe an activity to show that a current carrying conductor, placed in an external magnetic field experiences a force.

(b) Imagine that you are sitting in a chamber with your back to one wall. An electron beam, moving horizontally towards the front wall from the back wall, is deflected by a strong magnetic field to your right side. Find the direction of the magnetic field.

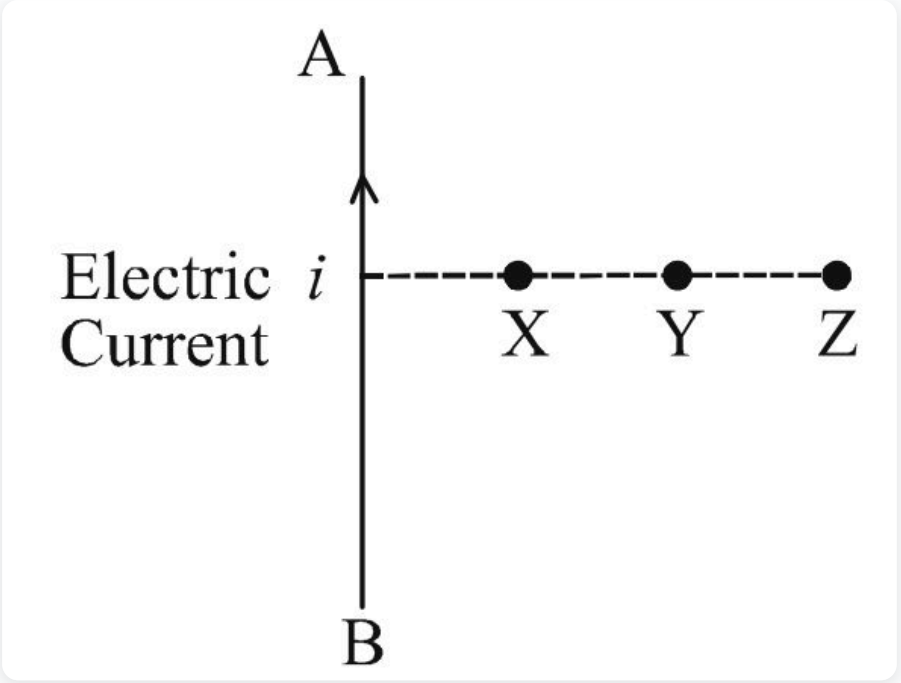
[3 Marks]

Question 39.

(a) The pattern of magnetic field due to a current carrying wire depends upon the shape made by that wire. Justify.

(b) A current carrying straight wire AB is shown in the given figure. Out of X, Y and Z on which point will the strength of magnetic field be maximum and why?

[3 Marks]



Section E

Question 40.

Given below are certain situations. Analyse each and describe its possible impact :

(i) A population of bacteria living in temperate waters whose temperature increased by global warming.

(ii) The sperm encounters the egg when it reaches the oviduct in human females.

(iii) Self pollination does not occur in a flower that contains only pistil.

(iv) Egg does not get fertilised in a human female.

(v) When the seed is placed under appropriate condition of water and air in the soil?

[5 Marks]

Question 41.

Given below are certain situations. Analyse and describe what would happen when :

(i) Spores are liberated from blob-like structures of the bread mould?

(ii) Leaves of bryophyllum fall on wet soil?

(iii) A pollen from different species land on the stigma of totally unrelated species?

(iv) Copper-T is placed in the uterus of a human female?

(v) *Spirogyra* breaks into smaller fragments upon maturation?

[5 Marks]

Question 42.

(i) Give reasons for the following :

(I) Covalent compounds are poor conductor of electricity.

(II) Soap does not form lather in hard water.

(III) Carbon shows catenation but silicon does not.

(ii) Write chemical equations for the following :

(I) Oxidation of ethanol by acidified $K_2Cr_2O_7$.

(II) Hydrogenation of ethene.

[5 Marks]

Question 43.

Mohan heated ethanol with a compound 'X' in the presence of a few drops of conc. H_2SO_4, and observed that a sweet smelling compound 'Y' is formed. When 'Y' is treated with sodium hydroxide it gives back ethanol and a compound 'Z'.

(i) Identify 'X', 'Y' and 'Z'.

(ii) Write the role of conc. H_2SO_4 in the reaction.

(iii) Write the chemical equations involved and name the reactions.

[5 Marks]

Question 44.

(i) Due to change in length and area of cross-section of a conductor, resistance of conductor changes while resistivity does not change. Why ?

(ii) Conductors of electric toasters and electric iron are made of an alloy rather than a pure metal. Why ?

(iii) Define the S.I. unit of electric current.

[5 Marks]

Question 45.

(i) How many bulbs of resistance 8 Ω each should be connected in parallel combination to draw a current of 2 A from a battery of 4 V ?

(ii) Name the device used for measuring electric current. How is it connected in a circuit ?

(iii) State Joule's law of heating.

[5 Marks]