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. Kidneys help to regulate the volume of fluid and various metabolites waste products in the body. Normally, kidney filter about 180 L of fluid daily but the volume actually excreted out is only a litre or two a day. Patients with kidney failures can be saved by dialysis and kidney transplant.

(1) Write the structure and function of Bowman's capsule.

[1 Marks]

(2) Although kidneys filter a large amount (about 180 L daily) of fluids, still the excretion from the body is only about a litre or two. Why ?

[1 Marks]

(3) What is excretion ? Why is it necessary for any living organism ?

[2 Marks]

Question 2. Alcohol forms a homologous series with general formula C_nH_{2n+1}–OH and –OH group as functional group. Ethanol is commonly called alcohol and is used in alcoholic drinks. It is good solvent, used in medicines, cough syrups, tonics etc.

(1) Write structural formula and name of 4th member of alcohol homologous series.

[1 Marks]

(2)

What happens when ethanol is heated with alkaline $KMnO_4$? Write chemical equation involved.

[1 Marks]

(3) Write the chemical equation of reaction of ethanol with ethanoic acid in the presence of concentrated H_2SO_4 . Write the name of this reaction.

[2 Marks]

Question 3.

Three students Shweta, Ayesha and Samridhi were performing an experiment to understand the factors on which the resistance of a conductor depends. Each one of them completed electric circuit with the help of a cell, an ammeter, a plug key and wire.

Shweta put nichrome wire of length ‘l’ in the circuit and after plugging the key, noted current in the ammeter.

Ayesha put nichrome wire of same thickness but twice the length i.e. ‘2l’ in the circuit and after plugging the key, noted current in the ammeter.

Samridhi took copper wire of length ‘l’ and same thickness in the circuit and after plugging the key, noted current in the ammeter.

(1) If the ammeter reading is X ampere with nichrome wire of length ‘l’, then what will be the ammeter reading if the length of nichrome wire is doubled with same area of cross-section ?

[1 Marks]

(2) What happens to the ammeter reading if the area of cross-section of nichrome wire is doubled, keeping the length of wire ‘l’ the same ?

[1 Marks]

(3) Define ‘resistivity’. Write its SI unit. Compare the resistivity of an alloy with its constituents metals.

[2 Marks]

Section B

Question 4.

Identify the part that controls the closing and opening of the stomatal pore in leaves of plants. 1 Select the correct option

[1 Marks]

(A) Stomata

(B) Epidermal cells

(C) Guard cells

(D) Chloroplasts

Question 5. Identify the endocrine gland that regulates the growth of human body

[1 Marks]

(A) Pituitary gland

(B) Thyroid gland

(C) Adrenal gland

(D) Pancreas

Question 6.

Choose the equation of reaction that correctly represents anaerobic respiration in muscles :

[1 Marks]

(A)

$$\text{Glucose} \rightarrow \text{Pyruvate} \xrightarrow[\text{of } O_2]{\text{Absence}} \text{Ethanol} + CO_2 + \text{Energy}$$

(B)

$$\text{Glucose} \xrightarrow{O_2} \text{Pyruvate} \xrightarrow{O_2} \text{Energy}$$

(C)

$$\text{Glucose} \rightarrow \text{Pyruvate} \xrightarrow[\text{oxygen}]{\text{Lack of}} \text{Lactic acid} + \text{Energy}$$

(D)

$$\text{Glucose} \xrightarrow{O_2} \text{Pyruvate} \xrightarrow[\text{oxygen}]{\text{Lack of}} \text{Ethanol} + \text{Energy}$$

Question 7.

In human beings, the implantation of fertilised egg takes place in which part of female reproductive system ?

[1 Marks]

(A) Cervix

(B) Uterus

(C) Vagina

(D) Oviduct

Question 8.

When a human egg is fertilized by a sperm having ‘Y’ chromosome, the zygote has the following combination of chromosomes :

[1 Marks]

(A) 44 + XX

(B) 22 + XX

(C) 44 + XY

(D) 22 + XY

Question 9.

Which of the following is a non-biodegradable pollutant ?

[1 Marks]

(A) Paper

(B) DDT

(C) Vegetable peel

(D) Wood

Question 10.

In an ecosystem, the decomposers perform an important role. Select the option indicating the role of decomposers.

[1 Marks]

(A) Break down inorganic substances into organic substances

(B) Do not act on organic compounds.

(C) Convert inorganic materials to simpler forms

(D) Break down complex organic substances to simple inorganic substances.

Question 11.

two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option from (A), (B), (C) and (D) given below :

Assertion (A) : Bacteria that can withstand heat have better chances of survival in a heat wave.

Reason (R) : Accumulation of variations in a species increases the chances of its survival in changing environment.

[1 Marks]

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

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

Question 12. two statements – Assertion (A) and Reason (R). Answer these questions selecting the appropriate option from (A), (B), (C) and (D) given below : Assertion (A) : The peristaltic movements occur all along the gut. Reason (R) : The lining of the gut has muscles that contract rhythmically to push the food in regulated manner

[1 Marks]

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

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

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

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

Question 13.

The volume ratio of hydrogen and oxygen gases liberated during electrolysis of water is :

[1 Marks]

(A) 1 : 2

(B) 2 : 1

(C) 4 : 1

(D) 1 : 3

Question 14.

Which of the following set of compounds does not belong to same homologous series ?

[1 Marks]

(A) C_2H_6 and C_3H_8

(B) C_3H_8 and C_5H_{12}

(C) CH_4 and C_4H_{10}

(D) C_4H_8 and C_5H_{12}

Question 15.

Which of the following is an amphoteric oxide ?

[1 Marks]

(A) Na_2O

(B) CO_2

(C) Al_2O_3

(D) K_2O

Question 16.

Study the following table and select the correct option :

[1 Marks]

Salt	Acid used	Base used	Nature of Salt
$NaCl$	HCl	NaOH	Basic
Na_2CO_3	H_2CO_3	NaOH	Neutral
Na_2SO_4	H_2SO_4	NaOH	Acidic
CH_3COONa	CH_3COOH	NaOH	Basic

(A) CH_3COONa | CH_3COOH | NaOH | Basic

(B) Na_2SO_4 | H_2SO_4 | NaOH | Acidic

(C) Na_2CO_3 | H_2CO_3 | NaOH | Neutral

(D) NaCl | HCl | NaOH | Basic

Question 17.

Which of the following will not undergo addition reaction ?

[1 Marks]

(A) C_2H_2

(B) C_3H_8

(C) C_4H_8

(D) C_2H_4

Question 18.

Four solutions, namely fructose, ethanol, hydrochloric acid and sodium hydroxide filled in four separate beakers are connected one by one in an electric circuit with a bulb. The solutions in which the bulb will glow when current is passed are :

[1 Marks]

(A) ethanol and hydrochloric acid

(B) fructose and ethanol

(C) fructose and sodium hydroxide

(D) hydrochloric acid and sodium hydroxide

Question 19.

Which gas is evolved when magnesium metal reacts with very dilute HNO_3 ?

[1 Marks]

(A) Oxygen

(B) Hydrogen

(C) Nitrogen Dioxide

(D) Nitrogen

Question 20. two statements are given – one labelled as Assertion (A) and other labelled as Reason (R). Answer this question selecting the appropriate option from (A), (B), (C) and (D) given below :

Assertion (A) : Reaction of quick lime with water is an exothermic reaction. Reason (R) : A large amount of heat is evolved on the reaction of quick lime and water.

[1 Marks]

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

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

(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.

Rays from the sun converge at a point 25 cm behind a convex lens. The distance at which an object be placed in front of the lens to get a virtual image, is :

[1 Marks]

(A) 20 cm

(B) 40cm

(C) More than 50 cm

(D) 50cm

Question 22. To restore clear vision in persons whose size of the eye ball has reduced, he/she is suggested to use suitable

[1 Marks]

(A) Converging lens

(B) Diverging lens

(C) Bifocal lens

(D) Cylindrical lens

Question 23.

two statements are given – one labelled as Assertion (A) and the other labelled as Reason (R). Select the correct answer to this question from the codes (A), (B), (C) and (D) as given below : Assertion (A) : The needle of a magnetic compass kept in strong external magnetic field, always aligns itself in northsouth direction on the earth. Reason (R) : Behaviour of the needle of a compass is same as that of a freely suspended bar magnet.

[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 the Assertion (A)

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

Section C

Question 24.

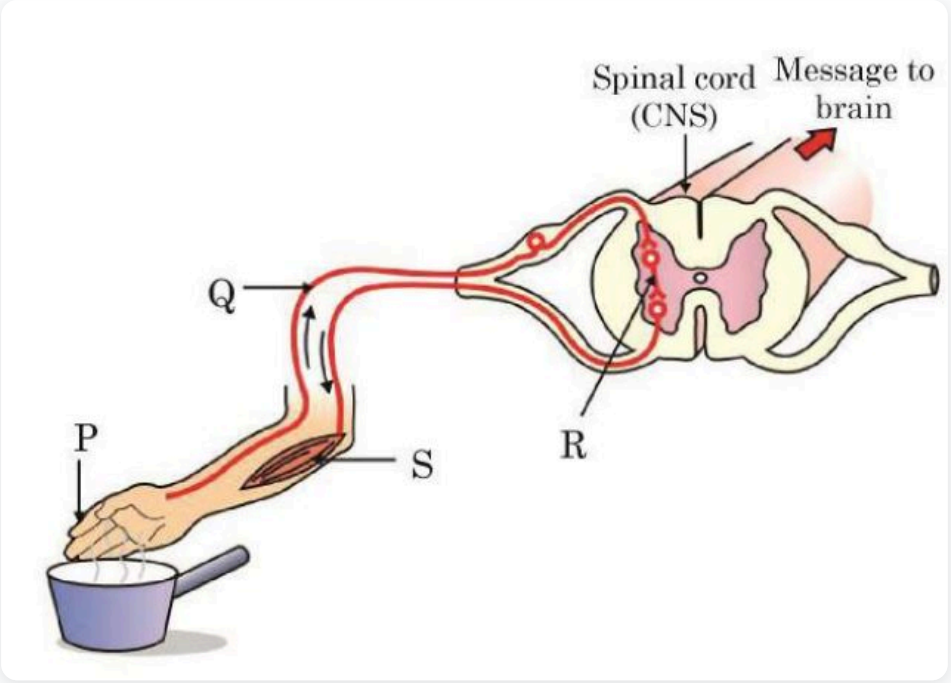
Give a diagrammatic representation of nutrition in Amoeba.

[2 Marks]

Question 25.

Observe the given figure and identify the labelled parts P, Q, R and S :

[2 Marks]



Question 26.

Which of the plant hormones are responsible for the following processes ?

(i) Promote cell division

(ii) Inhibition of growth

(iii) Detection of light

(iv) Wilting of leaves

[2 Marks]

Question 27.

Briefly mention the steps in double-circulation through human heart

[2 Marks]

Question 28.

Define the following terms :

(i) Olfactory indicator

(ii) Water of crystallization

[2 Marks]

Question 29.

(a) Relate the speed of light in the given medium with its optical density.

(b) Using the information given in the table below, arrange the medium A, B and C in the ascending order of their optical density

[2 Marks]

Medium	Speed of light (m/s)
A	2.25×10^8
B	2×10^8
C	2.08×10^8

Question 30.

(i) How does the change in curvature of the eye lens helps us in the process of seeing the nearby objects clearly ?

(ii) State the range of the power of accommodation of a normal human eye.

[2 Marks]

Question 31.

Draw a ray diagram to show the correction of eye defect of an old man who can not see an object placed closer than 1 m from his eye, clearly.

[2 Marks]

Section D

Question 32.

Based on Mendel's experiment show the cross between round, yellow seeds of pea plant (RRYY) with wrinkled and green seeds of pea plant (rryy) upto F_2 generation. Write the number of seeds/plants with following genetic (Genotype) makeup in F_2 generation :

(i) RRYY

(ii) rry

[3 Marks]

Question 33.

(a) Mention any one harmful effect of using plastic bags on the environment. Suggest better alternatives to the usage of plastic bags.

(b) Paddy fields require a large amount of water. The pesticides and chemical fertilizers used are washed down into the soil or waterbodies. How do these chemicals reach our bodies ? What is this phenomenon known as ?

[3 Marks]

Question 34.

What happens when

(i) lead (II) nitrate is heated ?

(ii) iron (II) sulphate is heated ?

(iii) silver chloride is exposed to sunlight ? Write balanced chemical equations of the reactions involved in support of your answer.

[3 Marks]

Question 35.

(a) Give the chemical name and formula of Plaster of Paris.

(b) Write the chemical equation of its preparation.

(c) Give any two uses of it

[3 Marks]

Question 36.

(a) Name the acid present in ant’s sting.

(b) Give reason :

(i) While diluting an acid, it is recommended that the acid should be added to water.

(ii) Baking soda is used as an antacid.

[3 Marks]

Question 37.

(a) Draw the ray diagram for refraction of light through a glass prism and mark angle of refraction and angle of deviation.

(b) When the path of a light ray refracted through a glass prism is reversed how will the angle of deviation change ? Explain.

[3 Marks]

Question 38.

(a) A ray of light after reflection from a concave mirror becomes parallel to its principal axis. Draw a labelled ray diagram to show this.

(b) (i) Differentiate between the virtual images formed by a convex mirror and concave mirror.

(ii) "The value of magnification 'm' for a mirror is –2." Calculate the height of object if the height of image is 20 cm.

[3 Marks]

Question 39.

(a) Why does an electric bulb become dim when an electric heater in parallel circuit is switched ON ?

(b) How to connect three resistors each of resistance 8Ω, so that the equivalent resistance of the combination is 12 Ω ? Draw diagram of the combination and justify your answer.

[3 Marks]

Section E

Question 40.

(i) In an angiospermic flower, fertilization is said to take place when male gametes carried in the pollen tube fuse with the female gamete, present in the embryo sac. This results in lot of changes in different parts of the flower. State the changes taking place in the following structures of flower post fertilization :

(a) Zygote

(b) Ovule

(c) Ovary

(d) Sepals

(ii) Define germinati

[5 Marks]

Question 41.

(i) Sugarcane does not produce seeds so name the process through which it will be able to reproduce.

(ii) List any two advantages of this method.

(iii) Besides sugarcane, give two more examples of plants that reproduce by this method.

(iv) Why regeneration is not possible in all the types of animals ?

[5 Marks]

Question 42.

(i) Give reasons for the following :

(I) Ionic compound have generally high melting points and boiling points.

(II) Solder, an alloy of lead and tin, is used for welding electrical wires.

(III) Carbon cannot reduce the oxides of Na or Mg.

(ii) The reaction of compound 'X' with aluminium is used to join railway tracks :

(I) Identify the compound 'X'.

(II) Name the reaction.

(III) Write the balanced chemical equation of the reaction of compound 'X' with aluminium.

[5 Marks]

Question 43.

(i) Write the balanced chemical equations when :

(I) A mixture of Cu_2O and Cu_2S is heated.

(II) ZnS is heated in the presence of oxygen.

(ii) Give reasons for the following :

(I) The wires carrying current in homes have a coating of PVC.

(II) To make hot water tanks, copper is used and not steel.

(iii) Show the formation of ionic compound CaO with electron dot structure. [Atomic number : Ca = 20, O = 8]

[5 Marks]

Question 44.

(i) Draw a diagram showing the magnetic field lines around a bar magnet. Write any two characteristics of magnetic field lines.

(ii) Write the statement of Right hand thumb rule.

(iii) The concentric circles representing the magnetic field around a current carrying straight wire become larger and larger as we move away from the wire. How does magnetic field change on these concentric circles ?

[5 Marks]

Question 45.

(i) Draw a diagram, showing the magnetic field lines in and around the current carrying solenoid. Write any two salient features of these lines.

(ii) What is an electromagnet and how is it made ?

[5 Marks]