CBSE Class 10 Science - 03
Sample / Practice Paper - 2025-26
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Time allowed: 3 hours | Maximum marks: 80

General Instructions:

1. This question paper consists of 39 questions in 5 sections.
2. All questions are compulsory. However, an internal choice is provided in some questions. A student is expected to attempt only one of these questions.
3. Section A consists of 20 objective-type questions carrying 1 mark each.
4. Section B consists of 6 Very Short Answer questions carrying 2 marks each.Answers to these questions should be in the range of 30 to 50 words.
5. Section C consists of 7 Short Answer questions carrying 3 marks each. Answers to these questions should be in the range of 50 to 80 words.
6. Section D consists of 3 Long Answer questions carrying 5 marks each.Answers to these questions should be in the range of 80 to 120 words.
7. Section E consists of 3 source-based/case-based questions carrying 4 marks each with sub-parts.

Section A (Objective Type Questions - 1 mark each)

1. Which of the following is an example of a displacement reaction?
   (a) $2Mg + O_2 \rightarrow 2MgO$
   (b) $2H_2O \rightarrow 2H_2 + O_2$
   (c) $Zn + CuSO_4 \rightarrow ZnSO_4 + Cu$
   (d) $NaOH + HCl \rightarrow NaCl + H_2O$
2. The part of the brain that controls posture and balance of the body is:
   (a) Cerebrum
   (b) Cerebellum
   (c) Medulla
   (d) Pons
3. The SI unit of electric potential difference is:
   (a) Ampere
   (b) Volt

(c) Ohm
(d) Watt

4. The anther contains:
   (a) Sepals
   (b) Ovules
   (c) Pistil
   (d) Pollen grains
5. Which of the following metals is found in its native state in nature?
   (a) Gold
   (b) Iron
   (c) Sodium
   (d) Calcium
6. The human eye forms the image of an object at its:
   (a) Cornea
   (b) Iris
   (c) Pupil
   (d) Retina
7. Which of the following is a balanced chemical equation?
   (a) $H_2 + O_2 \rightarrow H_2O$
   (b) $Mg + O_2 \rightarrow MgO$
   (c) $2H_2 + O_2 \rightarrow 2H_2O$
   (d) $Fe + H_2O \rightarrow Fe_3O_4 + H_2$
8. The phenomenon of electromagnetic induction is:
   (a) the process of charging a body
   (b) the process of generating magnetic field due to a current passing through a conductor
   (c) producing induced current in a coil due to relative motion between a magnet and the coil
   (d) the process of rotating a coil of an electric motor
9. Which of the following is not a part of the digestive system?
   (a) Stomach
   (b) Liver
   (c) Lungs
   (d) Small intestine
10. The resistivity of a material depends on:
    (a) its length
    (b) its thickness
    (c) its temperature
    (d) its nature
11. The functional group present in butanoic acid is:
    (a) -CHO
    (b) -COOH
    (c) -OH
    (d) >C=O
12. The structural and functional unit of the nervous system is:
    (a) Neuron
    (b) Nephron

(c) Sarcomere
(d) Alveolus

13. The main constituent of biogas is:
    (a) Methane
    (b) Ethane
    (c) Propane
    (d) Butane
14. The exchange of genetic material takes place in:
    (a) Asexual reproduction
    (b) Sexual reproduction
    (c) Budding
    (d) Vegetative propagation
15. The focal length of a plane mirror is:
    (a) at infinity
    (b) zero
    (c) negative
    (d) none of these
16. Which of the following is a non-renewable source of energy?
    (a) Wood
    (b) Sun
    (c) Fossil fuels
    (d) Wind

For Questions 17 to 20, two statements are given – one labelled Assertion (A) and the other labelled Reason (R). Select the correct answer to these questions from the codes (a), (b), (c) and (d) as 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.

17. Assertion (A): The strength of the magnetic field produced at the center of a current-carrying circular loop is inversely proportional to its radius.
    Reason (R): The magnetic field strength is directly proportional to the current flowing through the loop.
18. Assertion (A): Green plants are called producers.
    Reason (R): Green plants prepare their own food by photosynthesis.
19. Assertion (A): Variation is useful for the survival of species over time.
    Reason (R): Variations are the basis for evolution.
20. Assertion (A): The power of a convex lens is positive.
    Reason (R): A convex lens has a positive focal length.

Section B (Very Short Answer Questions - 2 marks each)

21. What are alloys? Give two examples of alloys.
22. What are the advantages of vegetative propagation?
23. A wire of resistance R is cut into five equal parts. These parts are then connected in parallel. If the equivalent resistance of this combination is R', then what is the ratio R/R'?
24. What are the harmful effects of acid rain?
25. What is the importance of DNA copying in reproduction?
26. A person needs a lens of power -5.5 dioptres for correcting his distant vision. For correcting his near vision, he needs a lens of power +1.5 dioptre. What is the focal length of the lens required for correcting (i) distant vision, and (ii) near visi[12]on?

Section C (Short Answer Questions - 3 marks each)

27. What is the difference between saturated and unsaturated hydrocarbons? Give one example of each.
28. How is the sex of a newborn individual determined in humans?
29. An object 5 cm in length is placed at a distance of 20 cm in front of a convex mirror of radius of curvature 30 cm. Find the position of the image, its nature and size.
30. Draw a diagram of the human alimentary canal and label the following parts:
    (a) Oesophagus
    (b) Gall bladder
    (c) Pancreas
31. Give reasons for the following:
    (a) Carbon is tetravalent.
    (b) Diamond has a high melting point.
    (c) Graphite is a good conductor of electricity.
32. What is presbyopia? What are its causes and how is it corrected?
33. Differentiate between homologous and analogous organs with examples.

Section D (Long Answer Questions - 5 marks each)

34. (a) State Fleming's left-hand rule.13
    (b) Describe the principle, construction, and working of an electric motor with the help of a neat diagram.
    OR
    (a) State the principle of a generator.
    (b) Describe the construction and working of an AC generator with a neat diagram.
35. (a) Draw a neat diagram of the human excretory system and label the following parts:
    (i) Kidney (ii) Ureter (iii) Urinary bladder (iv) Urethra
    (b) Describe the process of urine formation in humans.
36. (a) What is a neutralization reaction? Give two examples.
    (b) What happens when an acid or a base is mixed with water?
    (c) Write the chemical name and formula of washing soda. How is it prepared?

Section E (Case-Based Questions - 4 marks each)

37. Read the following and answer any four questions from 37 (i) to 37 (v).
    Metals are generally hard, malleable, ductile, and good conductors of heat and electricity. However, there are some exceptions. For example, sodium and potassium are soft metals that can be cut with a knife. Mercury is a liquid metal at room temperature. Lead and mercury are poor conductors of heat.

(i) Name a metal that is a liquid at room temperature.

(ii) Name a non-metal that is a good conductor of electricity.

(iii) Name two metals that are soft and can be cut with a knife.

(iv) What is meant by malleability?

(v) Why are metals good conductors of electricity?

38. Read the following and answer any four questions from 38 (i) to 38 (v).
    A food web consists of several interconnected food chains. It shows the complex feeding relationships in an ecosystem. In a food web, an organism can occupy more than one trophic level. The flow of energy in a food web is multidirectional.

(i) What is a food web?

(ii) What is the difference between a food chain and a food web?

(iii) What is the significance of a food web?

(iv) In a food web, if the population of lions decreases, what will be the effect on the population of deer?

(v) Draw a food web consisting of at least four organisms.

39. Read the following and answer any four questions from 39 (i) to 39 (v).
An electric circuit consists of a battery, a key, an ammeter, a voltmeter, and a resistor. The ammeter is connected in series in the circuit, while the voltmeter is connected in parallel across the resistor. The key is used to switch the circuit on or off.

(i) What is the function of an ammeter in an electric circuit?

(ii) How is a voltmeter connected in a circuit?

(iii) What is the function of a key in an electric circuit?

(iv) State Ohm's law.

(v) A current of 0.5 A is drawn by a filament of an electric bulb for 10 minutes. Find the amount of electric charge that flows through the circuit.