

**Sample Question Paper 2020 – 8
Science - Class – X****Time allowed: 03 Hours****Maximum Marks: 80****General Instructions:**

- I. The Question paper comprises of three Sections A, B and C. You have to attempt all the sections.
- II. All Questions are compulsory but some questions have internal choice.
- III. Question number 1 to 20 in Section - A are one - mark questions. Question number 1 to 10 are multiple choice questions. Each has four choices (a), (b), (c) and (d) out of which only one is correct. Question number 11 to 20 are very short answers (VSA) and Assertion-Reasoning. These are to be answered in brief.
- IV. Question number 21 to 30 in Section - B are three marks questions. These are to be answered in about 50 words each.

SECTION - A

1. A full length image of a distant tall building can definitely be seen by using:
(a) A concave mirror
(b) A convex mirror
(c) A plane mirror
(d) Both concave as well as plane mirror
2. Consider the following statements:
A. Immediate response to stimulus is shown by *Mimosa pudica*.
B. Stems are positively geotropic while roots are negatively geotropic.
Which of these statement(s) is/are correct?
(a) A only (b) B only (c) Both A and B (d) Neither A nor B
3. Gases are good conductors of electricity at:
(a) High pressure (b) Low pressure (c) Low temperature (d) High temperature
4. A solution reacts with crushed egg-shells to give a gas that turns lime-water milky. The solution contains:
(a) NaCl (b) HCl (c) LiCl (d) KCl
5. Ovulation in female human beings stops after the age of _____.
(a) 55–60 (b) 30–35 (c) 45–50 (d) 18–20
6. Tidal energy is a:
(a) form of energy obtained from kinetic energy of moving ocean water.
(b) form of energy which is obtained from the river in the form of tidal waves.
(c) form of energy which is obtained from the lake in the form of tidal waves.
(d) form of energy which is obtained from the ocean in the form of tidal waves.

7. Match column-I with column-II and select the correct answer using the codes.

Column-I	Column-II
A. Carbon black	P. Water filters
B. Diamond	Q. Fuel
C. Coke	R. Jewellery
D. Charcoal	S. Filler in automobiles
(a) A-Q; B-R; C-S; D-P	(b) A-P; B-Q; C-Q; D-S
(c) A-S; B-R; C-P; D-Q	(d) A-S; B-R; C-Q; D-P

8. The three elements calcium, strontium and barium form a triad. What is the basis of this grouping?
- Elements are in the increasing order of their atomic weights.
 - The atomic weight of the middle element is equal to the average of the atomic weight of extreme elements.
 - Elements in a triad have similar chemical properties.
- (a) Only A and B (b) Only B and C (c) Only A and C (d) A, B and C
9. The anther contains:
- (a) sepals (b) ovules (c) carpel (d) pollen grains
10. Magnetic lines do not intersect on one-another because
- they are at a distance.
 - they are in the same direction.
 - they are parallel to another.
 - at the point of intersection there will be two direction of the magnetic force which is impossible.
11. What is the difference between a brass and a bronze?
12. What are the advantages of sexual reproduction over asexual reproduction?
13. Identify the defect of an eye, most of the old people suffer from hardening of eyelens.

OR

Which phenomenon of light is responsible for the working of the eye?

14. Give the name of any three water resources.

OR

Which fossil fuel is conserved :

- when we save electricity?
 - when we use bicycle for covering short distances instead of a motorbike?
15. What is the role of a plane mirror and a glass sheet in a solar cooker?
16. Why do gold ornaments look new even after several years of use ?

OR

Metals replace hydrogen from acid, whereas non-metals do not. why?

17. Name the largest cell in the human body.

DIRECTIONS : Each of these questions contains an Assertion followed by Reason. Read them carefully and answer the question on the basis of following options. You have to select the one that best describes the two statements.

- If both Assertion and Reason are correct and Reason is the correct explanation of Assertion.
- If both Assertion and Reason are correct, but Reason is not the correct explanation of Assertion.
- If Assertion is correct but Reason is incorrect.
- If Assertion is incorrect but Reason is correct.

18. **Assertion:** During physiology of excretion, deamination does not take place in liver.
Reason: Deamination is a process to make use of excess of amino acids which can not be incorporated into protoplasm.
19. **Assertion:** Gold plating provides high resistance to corrosion.
Reason: More reactive metal, corrodes easily, less reactive metal is less likely to get corroded.
20. **Assertion:** A metallic wire is neutral although it contains large number of free electrons.
Reason: In a metallic wire, net charge is zero.

SECTION - B

21. Why is mixture of water and alcohol used instead of water in radiators of vehicles in cold countries?

OR

Give the molecular formula of one homologues of each of the following:

- (a) C_6H_{14} (b) C_3H_6 (c) C_4H_8
22. Draw the schematic diagram of circuit containing the following electrical components:
(a) A resistance (b) A voltmeter (c) An electric bulb
(d) A cell (e) Plug key (open) (f) An ammeter.
23. Give one example of each with their chemical and molecular formulae:
(a) Carbonate salt (b) Chloride salt (c) Copper salt
(d) Sodium salt (e) Nitrate salt (f) Sulphate salt
24. Identify the neutral atom in the periodic table which has the same number of electrons as Na^+ and F^- .
25. What are the differences between the transport of materials in xylem and phloem?

OR

Compare the alveoli in the lungs and nephrons in the kidneys with respect to their structure and function.

26. What are fossil evidence? Give an example.
27. An object is placed at a distance of 10 cm from a concave mirror of focal length 20 cm. Find the image distance and nature of image.

OR

Prove that the refractive index of glass with respect to air is the reciprocal of the refractive index of air with respect to glass.

28. An acid and a base react to form a salt, which consists of positive and negative ions. Explain with the help of an example which ion forms cation and anion in the reaction.
29. Describe the functioning of nephron.
30. How does our body respond when adrenaline is secreted into the blood?

SECTION - C

31. Explain the following.

- (a) Why is the tungsten used almost exclusively for filament of electric lamps?
(b) Why are the conductors of electric heating devices, such as bread-toasters and electric irons made of an alloy rather than a pure metal?
(c) Why is the series arrangement not used for domestic circuits?
(d) How does the resistance of a wire vary with its area of cross-section?
(e) Why are copper and aluminium wires usually employed for electricity transmission?

OR

- (a) What is a solenoid?
(b) Draw the pattern of magnetic field formed around a current carrying solenoid. Compare this field to that of a bar magnet.
(c) Explain an activity to show that a current carrying conductor experiences a force when placed in a magnetic field.
32. Define covalent bond? What do you mean by the term covalency. Give an example of each containing
(a) single bond (b) double bond (c) triple bond.

OR

Write down the chemical equations to represent the reaction of ethanoic acid with:

- (a) Sodium metal (b) Sodium carbonate
(c) Sodium hydroxide (d) Ethanol in the presence of a little conc. H_2SO_4
(e) Heating with NaOH in presence of CaO.
33. What are phytohormones? Name the various phytohormones and give their function?

34. A 14- year old student is not able to see clearly the questions written on the blackboard placed at a distance of 5 m from him.
- (a) Name the defect of vision he is suffering from.
 - (b) Name the type of lens used to correct this defect.
 - (c) With the help of labelled ray diagram, show how this defect can be corrected.
35. What happens when:
- (a) Sulphur dioxide gas reacts with water.
 - (b) Red-hot iron reacts with steam.
 - (c) Potassium oxide reacts with water
 - (d) Magnesium reacts with very dilute nitric acid.
 - (e) Sodium reacts with water
36. What is the impact of garbage on the environment?

OR

How can you as an individual contribute or make a difference to the management of (a) forests and wildlife (b) water resources (c) coal and petroleum?