GIRI SIR'S CLASSES

HATIGAON, GUWAHATI

ASSERTION AND REASON TYPE QUESTION AND ANSWERS

Class 10 - Science

1. **Assertion (A):** The food items containing oil and fat are flushed with nitrogen. **[1]**
Reason (R): Oil and fat become rancid on oxidation which has the bad taste and smell.

   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.

2. **Assertion (A):** Corrosion of iron is commonly known as rusting. **[1]**
Reason (R): Corrosion of iron occurs in presence of water and air.

   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.

3. **Assertion (A):** Colour of copper sulphate solution changes when an iron nail is kept immersed in it. **[1]**
Reason (R): The colour of copper sulphate solution changes when iron nail is kept immersed in it due to the decomposition reaction taking place between iron and copper leading to formation of iron sulphate.

   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.

4. **Assertion (A):** Quicklime reacts vigorously with water releasing a large amount of heat. **[1]**
Reason (R): The above chemical reaction is an exothermic reaction.

   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.

5. **Assertion (A):** When calcium carbonate is heated, it decomposes to give calcium oxide and carbon dioxide. **[1]**
Reason (R): The decomposition reaction takes place on application of heat, therefore, it is an endothermic reaction.

   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.

6. **Assertion (A):** Calcium carbonate when heated gives calcium oxide and water. **[1]**
Reason (R): On heating calcium carbonate, a decomposition reaction takes place.

   a) Both A and R are true and R is the correct
   b) Both A and R are true but R is not the

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.

7. **Assertion (A):** Silver articles become black after sometime when exposed to sunlight. **[1]**

Reason (R): It is because silver reacts with carbonates present in the air.

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.

8. **Assertion (A):** Copper spoon is used to stir silver nitrate solution. **[1]**

Reason (R): Copper is less reactive than silver.

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.

9. **Assertion (A):** The balancing of chemical equations is based on the law of conservation of mass. **[1]**

Reason (R): Total mass of reactants is equal to the total mass of products.

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.

10. **Assertion:** The following chemical equation, is a balanced chemical equation. **[1]**

$2C_2H_6 + 7O_2 \longrightarrow 4CO_2 + 6H_2O$

Reason: In a balanced chemical equation, the total number of atoms of each element may or may not equal on both side of the equation.

a) Assertion and reason both are correct statements and reason is correct explanation for assertion.

b) Assertion and reason both are correct statements but reason is not correct explanation for assertion.

c) Assertion is correct statement but reason is wrong statement.

d) Assertion is wrong statement but reason is correct statement.

11. **Assertion (A):** Zinc reacts with sulphuric acid to form zinc sulphate and hydrogen gas and it is a displacement reaction. **[1]**

Reason (R): Zinc reacts with oxygen to form zinc oxide.

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.

12. **Assertion (A):** Copper vessels get covered with green coating in rainy season. **[1]**

Reason (R): It is because of the formation of copper carbonate.

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.

13. **Assertion (A):** In the following reaction **[1]**

$ZnO + C \rightarrow Zn + CO$

ZnO undergoes reduction.

Reason (R): Carbon is a reducing agent that reduces ZnO to Zn.

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.

14. **Assertion (A):** Magnesium ribbon keeps on burning in atmosphere of nitrogen. **[1]**

Reason (R): Magnesium reacts with nitrogen to form magnesium nitride and this reaction is combination reaction.

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.

15. **Assertion (A):** In a reaction of copper with oxygen, copper serves as a reducing agent. **[1]**

Reason (R): The substance which gains oxygen in a chemical reaction is a reducing agents.

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.

16. **Assertion (A):** White silver chloride turns grey in sunlight. **[1]**

Reason (R): Decomposition of silver chloride in the presence of sunlight takes place to form silver metal and chlorine gas.

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):** Photosynthesis is considered as an endothermic reaction. **[1]**

Reason (R): Energy gets released in the process of photosynthesis.

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.

18. **Assertion (A):** Sodium metal is stored under Kerosene. **[1]**

Reason (R): Metallic sodium melts when exposed to air.

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.

19. **Assertion (A):** A lead nitrate on thermal decomposition gives lead oxide, brown coloured nitrogen dioxide and oxygen gas. **[1]**

Reason (R): Lead nitrate reacts with potassium iodide to form yellow ppt. of lead iodide and the reaction is double displacement as well as precipitation reaction.

a) Both A and R are true and R is the correct

b) Both A and R are true but R is not the

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.

20. **Assertion (A):** A reducing agent is a substance that can either accept electrons. **[1]**

Reason (R): A substance that helps in reduction is known as a reducing agent.

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.

21. **Assertion (A):** Curd and sour substances should not be stored in copper vessels. **[1]**

Reason (R): Curd and other sour substances should not be kept in brass and copper vessels as they contain acids.

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.

22. **Assertion (A):** Sodium hydroxide reacts with zinc to produce hydrogen gas. **[1]**

Reason (R): Acids react with active metals to produce hydrogen gas.

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.

23. **Assertion (A):** Copper vessels get covered with green coating in rainy season. **[1]**

Reason (R): It is because of the formation of copper carbonate.

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.

24. **Assertion (A):** Baking soda is prepared by chlor-alkali process. **[1]**

Reason (R): Brine decomposes to sodium hydroxide on passing electricity through it.

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.

25. **Assertion (A):** Pure water is neither acidic nor basic. **[1]**

Reason (R): The pH of a solution is inversely proportional to the concentration of hydrogen ions in it.

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.

26. **Assertion (A):** On adding H_2SO_4 to water the resulting aqueous solution gets corrosive. **[1]**

Reason (R): Hydronium ions are responsible for corrosive action.

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.

27. **Assertion (A):** When common salt is kept open, it absorbs moisture from the air. **[1]**
Reason (R): Common salt contains magnesium chloride.

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.

28. **Assertion (A):** Common salt is used for the preparation of many chemicals such as sodium hydroxide, bleaching powder, baking soda, washing soda etc. **[1]**
Reason (R): Main source of sodium chloride is sea water.

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.

29. **Assertion (A):** Salts are the products of an acid-base reaction. **[1]**
Reason (R): Salt may be acidic or basic.

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.

30. **Assertion (A):** The aqueous solution of glucose and alcohol does not show acidic character. **[1]**
Reason (R): Aqueous solutions of glucose and alcohol do not give H^+ ions.

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.

31. **Assertion (A):** HCl gas does not change the color of dry blue litmus paper. **[1]**
Reason (R): HCl gas dissolves in the water present in wet litmus paper to form H^+ ions.

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.

32. **Assertion (A):** The chemical name of bleaching powder is calcium oxychloride. **[1]**
Reason (R): Bleaching powder is used as an oxidising agent in chemical industries.

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.

33. **Assertion (A):** Baking soda creates acidity in the stomach. **[1]**
Reason (R): Baking soda is alkaline.

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.

34. **Assertion (A):** Antacids neutralize the effect of extra acid produced in the stomach during indigestion and thus provide relief. **[1]**

Reason (R): Antacids are mild bases.

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.

35. **Assertion (A):** $AlCl_3$ is a basic salt. **[1]**

Reason (R): $AlCl_3$ is a salt of strong acid and a weak base.

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.

36. **Assertion (A):** HCl is a stronger acid than acetic acid. **[1]**

Reason (R): On dissociation, HCl yields lesser hydrogen ions for the same concentration as compared to acetic acid.

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.

37. **Assertion (A):** If the pH inside the mouth decreases below 5.5, the decay of tooth enamel begins. **[1]**

Reason(R): The bacteria present in mouth degrades the sugar and leftover food particles and produce acids that remains in the mouth after eating.

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.

38. **Assertion (A):** H_3PO_4 and H_2SO_4 are known as polybasic acids. **[1]**

Reason (R): They have two or more than two protons per molecule of the acid.

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.

39. **Assertion (A):** pH = 7 signifies pure water. **[1]**

Reason (R): At this pH, $[H^+] = [OH^-] = 10^{-7}$

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.

40. **Assertion (A):** Solutions of compounds like alcohol and glucose do not show acidic character. **[1]**

Reason (R): They do not show acidic character because they do not dissociate into ions.

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.

41. **Assertion (A):** Electrovalency of Na is +1. **[1]**
Reason (R): The number of electrons that an atom either loses or gains in the formation of an ionic bond is known as its valency.

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.

42. **Assertion (A):** Magnesium chloride is an ionic compound. **[1]**
Reason (R): Metals and nonmetals are formed by mutual transfer of electrons.

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.

43. **Assertion (A):** Zinc oxide is amphoteric in nature. **[1]**
Reason (R): Zinc oxide reacts with both acids and bases.

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.

44. **Assertion (A):** Silver and gold do not react with oxygen even at high temperatures. **[1]**
Reason (R): Silver and gold are less active metals.

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.

45. **Assertion (A):** In alumino thermite process, the metals like iron melts due to the heat evolved in the reaction. **[1]**
Reason (R): The reaction is
$Fe_2O_3 + 2Al \longrightarrow Al_2O_3 + 2Fe$

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.

46. **Assertion (A):** Aluminium is used to make utensils for cooking. **[1]**
Reason (R): Aluminium is a highly reactive metal.

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.

47. **Assertion (A):** Aluminium oxide and zinc oxide are acidic in nature. **[1]**
Reason (R): Amphoteric nature means that substances have both acidic and basic character.

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.

48. **Assertion (A):** Carbon reacts with oxygen to form carbon dioxide which is an acidic oxide. **[1]**
Reason (R): Non-metals form acidic oxides.

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.

49. **Assertion (A):** When zinc is added to a solution of iron (II) sulphate, no change is observed. **[1]**
Reason (R): Zinc is more reactive than iron.

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.

50. **Assertion (A):** Melting point and boiling point of ethanol are lower than that of sodium chloride. **[1]**
Reason (R): The forces of attraction between the molecules of ionic compounds are very strong.

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.

51. **Assertion (A):** The oxides of sulphur and phosphorus are acidic in nature. **[1]**
Reason (R): Metal oxides are basic in nature.

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.

52. **Assertion (A):** Metals in general have very high melting and boiling points. **[1]**
Reason (R): Metals have the strongest chemical bonds which are metallic in nature.

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.

53. **Assertion (A):** Copper is used to make hot water tanks and not steel (an alloy of iron). **[1]**
Reason (R): Copper does not react with hot water.

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.

54. **Assertion (A):** Ionic compounds have high melting and boiling points. **[1]**
Reason (R): A large amount of energy is required to break the strong inter-ionic attraction in ionic compounds.

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.

55. **Assertion (A):** Gas bubbles are observed when sodium carbonate is added to dilute hydrochloric acid. **[1]**

Reason (R): Carbon dioxide is given off in the reaction.

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.

56. **Assertion (A):** Acetic acid has six single bond and one double bond. **[1]**
Reason (R): It is unsaturated organic compound.

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.

57. **Assertion (A):** In alkanes, alkenes and alkynes the valency of carbon is always four. **[1]**
Reason (R): All hydrocarbons except alkanes contain double bonds.

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.

58. **Assertion (A):** Cooking oil decolorizes bromine water. **[1]**
Reason (R): Cooking oil is a saturated compound.

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.

59. **Assertion (A):** CH_3Cl is obtained from CH_4 by the action of Cl_2 in the presence of sunlight. **[1]**
Reason (R): It is obtained by an addition reaction.

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.

60. **Assertion (A):** Ethanoic acid is also known as glacial acetic acid. **[1]**
Reason (R): The melting point of pure ethanoic acid is 290 K and hence it often freezes during winters in cold climates.

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.

61. **Assertion (A):** Cooking oil decolourises bromine water. **[1]**
Reason (R): Cooking oil is a saturated compound.

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.

62. **Assertion (A):** Carbon and its compounds are used as fuels. **[1]**
Reason (R): They give lot of heat and light when burnt in air.

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.

63. **Assertion (A):** Soaps are not suitable for washing purpose when water is hard. **[1]**
Reason (R): Soaps have relatively weak cleansing action.

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.

64. **Assertion (A):** Carbon has ability to form long carbon chains. **[1]**
Reason (R): Carbon has a unique property to form long straight and branched chains called catenation.

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.

65. **Assertion (A):** Covalent compounds are generally poor conductor of electricity. **[1]**
Reason (R): They consist of molecules and not ions which can transfer charge.

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.

66. **Assertion (A):** Both aldehydes and ketones contain carbonyl group. **[1]**
Reason (R): In aldehydes, the functional group is attached to atleast one hydrogen atom.

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.

67. **Assertion (A):** Olefins have the general formula C_nH_{2n+1}. **[1]**
Reason (R): There is atleast one double bond between two carbon atoms in their molecules.

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.

68. **Assertion (A):** The functional group present in alcohols is -OH. **[1]**
Reason (R): It is the same group as present in water, hence water and alcohol have similar properties.

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.

69. **Assertion (A):** Carbon has four electrons in its valence shell. **[1]**
Reason (R): Carbon forms covalent bonds.

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.

70. **Assertion (A):** Propene reacts with HBr to give isopropyl bromide. **[1]**

Reason (R): Addition of Br_2 to alkene takes place at a faster rate in the presence of ionizing substance.

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.

71. **Assertion (A):** In esterification, carboxylic acid and alcohol react in the presence of acid to give ester. **[1]**

Reason (R): Esterification is the reverse of saponification.

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.

72. **Assertion (A):** Two members of a homologous series have similar chemical properties. **[1]**

Reason (R): Propane and butane are members of same homologous series.

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.

73. **Assertion (A):** Diamond is not good conductor of electricity. **[1]**

Reason (R): It has no free electrons.

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.

74. **Assertion (A):** Diamond and graphite are allotropes of carbon. **[1]**

Reason (R): Some elements can have different structural forms while in the same physical state. These different forms are called allotropes.

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.

75. **Assertion (A):** Iso-butane is the isomer of C_4H_{10}. **[1]**

Reason (R): Iso-butane has four C and ten-H atom.

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.