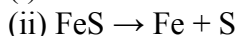
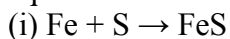


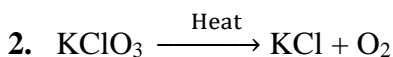
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Creative Questions

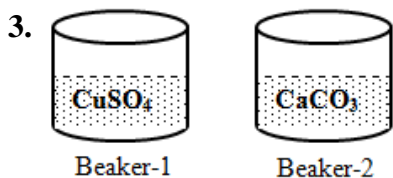
1. The science teacher has said to write the chemical reaction. At that time Sakib wrote the following two equations.



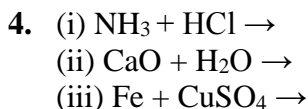
- | | |
|---|---|
| a) What is symbol? | 1 |
| b) What do you mean by the formula of water is H_2O ? | 2 |
| c) Explain the rules of the matter written by Sakib. | 3 |
| d) "Though the same elements and compounds are present in two equations written by Sakib, the equations are not same type."—Analyze it. | 4 |



- | | |
|--|---|
| a) What is formula? | 1 |
| b) All synthesizing reactions are addition reaction but all addition reactions are not synthesizing reaction.—Explain. | 2 |
| c) What type of reaction is the above reaction?—Explain. | 3 |
| d) Show that the number of atoms of above equation is equal before reaction and after reaction. | 4 |



- | | |
|---|---|
| a) What is valency? | 1 |
| b) What do you mean by chemical equation? | 2 |
| c) Explain the reaction after adding iron powder into the beaker-1. | 3 |
| d) What will be happened after running the gas that is produced by heating the compound of beaker-2 through lime water? | 4 |



- | | |
|--|---|
| a) What is radical? | 1 |
| b) Why is NaCl electrolyte? Explain. | 2 |
| c) Describe what kind of chemical reaction the number (i) reaction is. | 3 |
| d) The reactions of number (ii) and (iii) are of different kinds.—Analyze. | 4 |



- | | |
|----------------------|---|
| a) What is dry cell? | 1 |
|----------------------|---|

- b) Why is $C_6H_{12}O_6$ nonelectrolyte? Explain. 2
 c) What type of reaction will be happened when water is poured into the beaker 'L'? 3
 d) Are the reactions same that happen in the beaker 'M' and 'N'.—Analyze logically. 4

Multiple Choice Questions

1. How many elements have been discovered so far?
 a) 116 b) 118
 c) 120 d) 122
2. Symbols of elements are expressed by the first one or two letters of the—
 i. Latin name
 ii. Greek name
 iii. English name
 Which one of the following is correct?
 a) i and ii b) i and iii
 c) ii and iii d) i, ii and iii
3. What is the symbol of sodium?
 a) S b) So
 c) Sa d) Na
4. Which one is symbol?
 a) K b) O^-
 c) 2H d) Na^+
5. Which one is the correct expression of a formula?
 a) S b) 2H
 c) H_2 d) Na
6. What is needed to write the formula of a compound?
 a) Valency b) Isotope
 c) Mass number d) Atomic number
7. In the formula of ammonia (NH_3)—
 i. the valency of nitrogen is 3
 ii. the valency of hydrogen is 1
 iii. the valency of hydrogen is 3
 Which one of the following is correct?
 a) i and ii b) i and iii
 c) ii and iii d) i, ii and iii
8. Which one has more than one valency?
 a) Cl b) Cu
 c) Ca d) Ba
9. What is the valency of nitrate radical?
 a) 1 b) 2
 c) 3 d) 4
10. Which one is the valency of tin?
 a) 1 & 2 b) 1 & 3
 c) 2 & 3 d) 2 & 4
11. Which one is the positive radical?
 a) Sulphate b) Carbonate
 c) Phosphate d) Ammonium
12. How many atoms exist in a molecule of ammonia?
 a) 1 b) 2
 c) 3 d) 4
13. Which one does not stay independently?
 a) H_2 b) O_2
 c) CO_2 d) CO_3^{2-}
14. In the formula of carbon dioxide (CO_2)—
 i. the valency of carbon is 1
 ii. the valency of carbon is 4
 iii. the valency of oxygen is 2
 Which one of the following is correct?
 a) i and ii b) i and iii
 c) ii and iii d) i, ii and iii
15. What is the formula of aluminum oxide?
 a) AlO b) Al_2O_3
 c) Al_3O_2 d) $(NH_4)_2O$
16. Chemical reaction—
 i. releases energy
 ii. creates new materials
 iii. helps to cure diseases
 Which one of the following is correct?
 a) i and ii b) i and iii
 c) ii and iii d) i, ii and iii
17. What is the resultant state of the chemical reaction?
 a) Product b) Reactant
 c) Molecule d) None of these
18. In a chemical reaction—
 i. atoms are created
 ii. atoms are destroyed
 iii. atoms are rearranged
 Which one of the following is correct?
 a) i b) iii
 c) i and iii d) i, ii and iii
19. $2H_2 + O_2 \rightarrow 'W'$. What is 'W'?
 a) OH b) 2HO
 c) H_2O_2 d) $2H_2O$
20. What is not used to express a chemical equation?
 a) Symbol b) Formula
 c) Atomic number d) Mathematical Sign
21. Which set of numbers is used to balance the following reaction?
 $H_2 + O_2 \rightarrow H_2O$
 a) 1, 2, 2 b) 2, 1, 2
 c) 2, 2, 1 d) 1, 2, 2
22. Which one is not a synthesizing reaction?
 a) $Fe + S \rightarrow FeS$
 b) $Zn + S \rightarrow ZnS$
 c) $2Mg + O_2 \rightarrow 2MgO$
 d) $CaO + CO_2 \rightarrow CaCO_3$
23. What is the colour of sulphur powder?
 a) Blue b) Gray
 c) Yellow d) Brown
24. Burning of sulphur creates—
 i. blue flame

47. When potassium chlorate is heated, it produces—
i. water
ii. oxygen
iii. potassium chloride
 Which one of the following is correct?
a) i and ii *b)* i and iii
c) ii and iii *d)* i, ii and iii
48. What is the formula of acetic acid or vinegar?
a) CH₂O₂ *b)* C₆H₈O₇
c) C₆H₅OH *d)* CH₃COOH
49. What is the formula of calcium acetate?
a) CaCH₂O₂ *b)* Ca(C₆H₈O₇)₂
c) Ca₃(C₆H₅O₇)₂ *d)* (CH₃COO)₂Ca
50. Lime + Acetic acid → Calcium acetate + Water. What type of reaction is it?
a) Addition *b)* Substitution
c) Neutralization *d)* Decomposition
51. Products of which reaction are salt and water?
a) KClO₃ $\xrightarrow{\Delta}$
b) Mg + O₂ →
c) CaO + CO₂ →
d) CaO + CH₃COOH →
52. In which reaction is huge amount of heat energy produced?
a) Fe + S → FeS
b) KClO₃ $\xrightarrow{\Delta}$ KCl + O₂
c) CaO + CO₂ → CaCO₃
d) CaO + H₂O → Ca(OH)₂
53. In a dry cell—
i. zinc container is anode
ii. carbon rod with metal cap is cathode
iii. chemical energy is converted into electrical energy
 Which one of the following is correct?
a) i and ii *b)* i and iii
c) ii and iii *d)* i, ii and iii
54. What is absent in dry cell?
a) C *b)* H₂O
c) MnO₂ *d)* NH₄Cl
55. What is the colour of Sodium?
a) Blue *b)* Grey
c) White *d)* Brown
56. In the electrolysis of NaCl—
i. Cl⁻ goes to the anode
ii. Na⁺ goes to the cathode
iii. Cl⁻ donates electron to cathode
 Which one of the following is correct?
a) i and ii *b)* i and iii
c) ii and iii *d)* i, ii and iii
57. Na + H₂O → NaOH + 'Y'. What is 'Y'?
a) H *b)* O
c) H₂ *d)* O₂
58. Which one is non electrolyte?
a) HCl *b)* NaCl
c) CuSO₄ *d)* C₆H₁₂O₆