1. What are the apparatus required for this experiment?
2. Write the chemical formula of marble chip.
3. Can we use $CaCO_3$ powder for preparation of CO_2 gas?
4. Why marble chips are used instead of $CaCO_3$ powder?
5. Write the chemicals used for preparation of CO_2 gas.
6. How can you prepare dilute HCl?
7. Hydrochloric acid is a strong or weak acid? Give reason.
8. Explain the acidic nature of CO_2 gas?
9. What happens when CO_2 gas is passed through alkaline phenolphthalein solution?
10. What happens when moist blue and red litmus papers are shown to CO_2 gas?How CO_2 gas is collected?
11. What are the apparatus required for preparation of CO_2 gas?
12. How can you prepare CO_2 gas in laboratory?
13. Why moist blue litmus paper turns red on exposure to CO_2 gas?
14. .Write two methods of preparation of CO_2 gas.
15. What happens when a burning match stick is introduced into a jar containing CO_2 gas?
16. What happens when methyl orange indicator is added to aqueous solution of CO_2 gas?
17. What happens when CO_2 gas is passed through lime water first in less amount and thenin excess?
18. Write the reactions involved between CO_2 gas and lime water.19.What is the formula of lime water?
19. Why lime water turns milky when less amount of CO_2 gas is passed through it? GiveEquation.
20. Why milky colour disappears on passage of excess CO_2 gas through lime water? GiveEquation.
21. What happens when colourless $Ca(HCO_3)_2$ solution will be warmed strongly? GiveEquation.
22. What happens when a burning magnesium is introduced into gas jar containing CO_2gas? Give Equation.
23. Write two uses of CO_2 gas.25.What is dry ice?
24. How can you test that CO_2 gas is heavier than air?
25. Can sulphuric acid (H_2SO_4) be used in place of HCl for preparation of CO_2 gas?28.What type of bonding is present in CO_2 ?
26. Why smaller pieces of marble chips are required?
27. Why the thistle funnel is inserted deep to the bottom of the Woulfe's bottle?
28. 31.How can you test the solubility of CO_2 gas?
29. Write the principle of preparation of ammonia gas in laboratory?
30. What is the principle of collection of ammonia gas?
31. Write the apparatus required for preparation of ammonia gas?
32. What are the chemicals required for ammonia gas?
33. While clamping the hard glass test tube, its mouth is present slightly downward. Why?
34. Write the physical properties of ammonia gas?
35. What is the odour of ammonia gas?
36. What happens when a glass rod dipped in conc HCl is shown to the ammonia gas?
37. What happens when a test tube filled with ammonia gas is inverted into a trough of water?
38. Explain a test to show that ammonia is lighter than air?.
39. Which compound is required to dry ammonia gas?
40. Why conc. Sulphuric acid is not used to dry ammonia gas ?
41. Write two tests to show that ammonia is alkaline in nature?
42. What happens when ammonia gas is passed through Nessler's reagent? Give equation
43. What happens when ammonia gas is passed through ferric chloride solution? Giveequation?
44. Ammonia gas has rotten egg / pungent/ irritating/ sweet odour.
45. Ammonia is sparingly / insoluble / highly soluble in water?
46. What happens when ammonia gas is passed through copper sulphate solution in smallquantities?
47. What happens when ammonia gas is passed through copper sulphate solution inexcess?
48. Ammonia gas turns blue litmus to red / red litmus to blue?
49. Write the uses of ammonia gas?

50. What happens when ammonia gas is passed through phenolphthalein solution?
51. What is the combustibility property of ammonia?
52. Can NaOH or KOH be used in place of CaO or $Ca(OH)_2$ for preparation of ammonia?
53. What is that compound (brown precipitate) which forms when ammonia gas is passedthrough nessler's reagent?
54. Define crystallization.
55. Define solubility.
56. Define filtration.
57. Why the solution is not concentrated or heated to dryness during crystallization?
58. What is decantation?
59. Decantation and filtration which is a better process and why?
60. Why the saturated solution be cooled slowly?
61. What is blue vitriol?
62. What are hydrates?
63. What are anhydrous salts?
64. What is seeding ?
65. Aqueous solution of Copper Sulphate solution acidic or basic or neutral?
66. What is efflorescence?
67. What is the colour and structure of anhydrous Copper Sulphate ?
68. Why excess H_2SO_4 acid is not used for dissolving $CuCO_3$ powder ?
69. What is crystallization point ?
70. Define mother liquor .
71. Write the reaction between anhydrous $CuCO_3$ and dilute H_2SO_4 .
72. Why the $CuSO_4$ solution be prepared slightly acidic ?
73. Can CuO be used instead of $CuCO_3$ powder for preparation of blue vitriol? If yes, thenwrite the reaction.
74. Write two uses of $CuSO_4.5H_2O$?
75. Mention two other salts which can be prepared by this method .
76. Why a glass rod is used to transfer the solution from beaker to the filter paper cone inthe funnel?
77. How can one check the crystallization point ?
78. How a filter paper cone be prepared?
79. What do you mean by volumetric analysis?
80. What is titration?
81. Define titrant and titrate?
82. What are acidimetry and alkalimetry ?
83. Define a standard solution?
84. What do you mean by concentration / strength of solutions?
85. Define an indicator?
86. Name few indicators which are used during acid – base titration?
87. Define gram equivalent weight and gram equivalent?
88. What is molality and normality?
89. 10 grams of caustic soda is how much gram equivalents?
90. What is the principle of titration?
91. Why rinsing is necessary?
92. Why conical flask is not rinsed with acid or alkali?
93. What is an anti parallax card?
94. Why one should not hold the pipette from its bulb?
95. Why the last drop of the solution be not blown from its bulb?
96. Why one or two drops of indicator should always be used?
97. Define the end point or neutralization point?
98. How can you detect the neutralization point?
99. Why mostly decinormal (N/10) solutions are used rather than normal(N) orcentinormal (N/100) solutions?

100. Which solutions are required to rinse the burette and pipette?
101. To prepare 2 litres of solution, how much amount of sodium carbonate isrequired?
102. Why presence of air bubbles is not preferred in the burette while filling the acidsolution?
103. Why stirring of conical flask and slow addition of acid is required?
104. What are the colours of methyl orange and phenolphthalein solutions in acidic,alkali
105. and neutral mediums?
106. How the strength of the solution can be determined?
107. What do you mean by volumetric analysis?
108. Which solution is put in Burette?
109. What is titration?
110. Define titrant and titrate?
111. What are acidimetry and alkalimetry ?
112. Define a standard solution?
113. What do you mean by concentration / strength of solutions?
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132. Why presence of air bubbles is not preferred in the burette while filling the acidsolution?
133. How the strength of the solution can be determined?
134. What is acidradicals
135. How do you test for carbonate ?
136. What is the chemical equation involved in the test for sulphate ion
137. How do you test for sulphide ion ?
138. How can you test for nitrate ion ?
139. How does a salt become crystalline and amorphous?
140. How do you detect the presence of phosphate ion ?
141. Give the example of chemical reaction which involved for carbonate radicals ?
142. The acid radical carries ion.
143. What is brown ring test ?
144. What is dry test?
145. Which type of salt is subjected to sodalime test?.Which type of salt is subjected to flame test?
146. What type of wire can be used in the flame test?
147. What is wet test of salt
148. What are the group-I radicals and how they precipitated?
149. For what type of salts charcoal cavity reduction test is performed ?
150. For what type salt cobalt nitrate test is carried out?
151. What is the principle of charcoal cavity reduction test ?

152. Which dry test is applied for infusible salt to identify its basic radicals