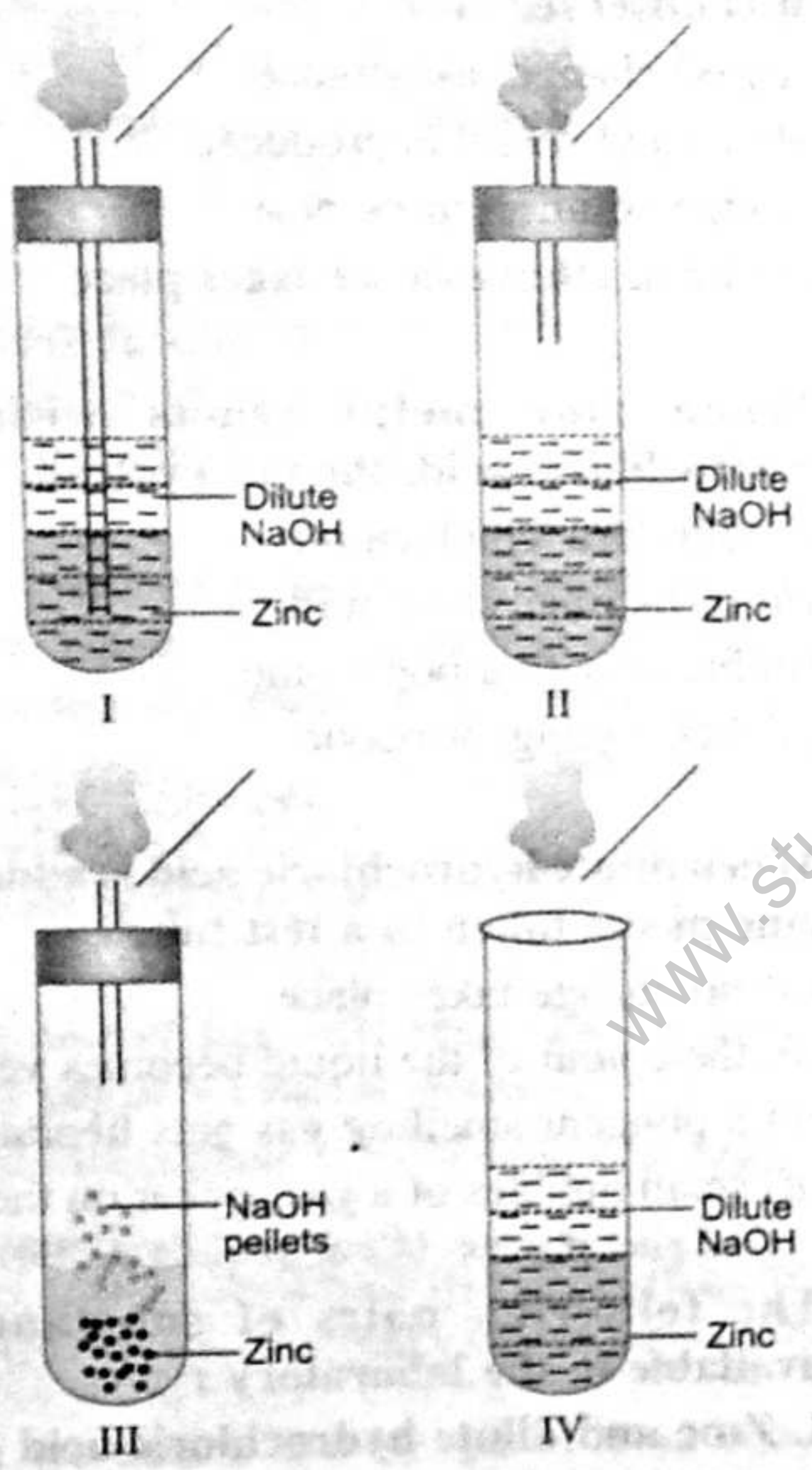


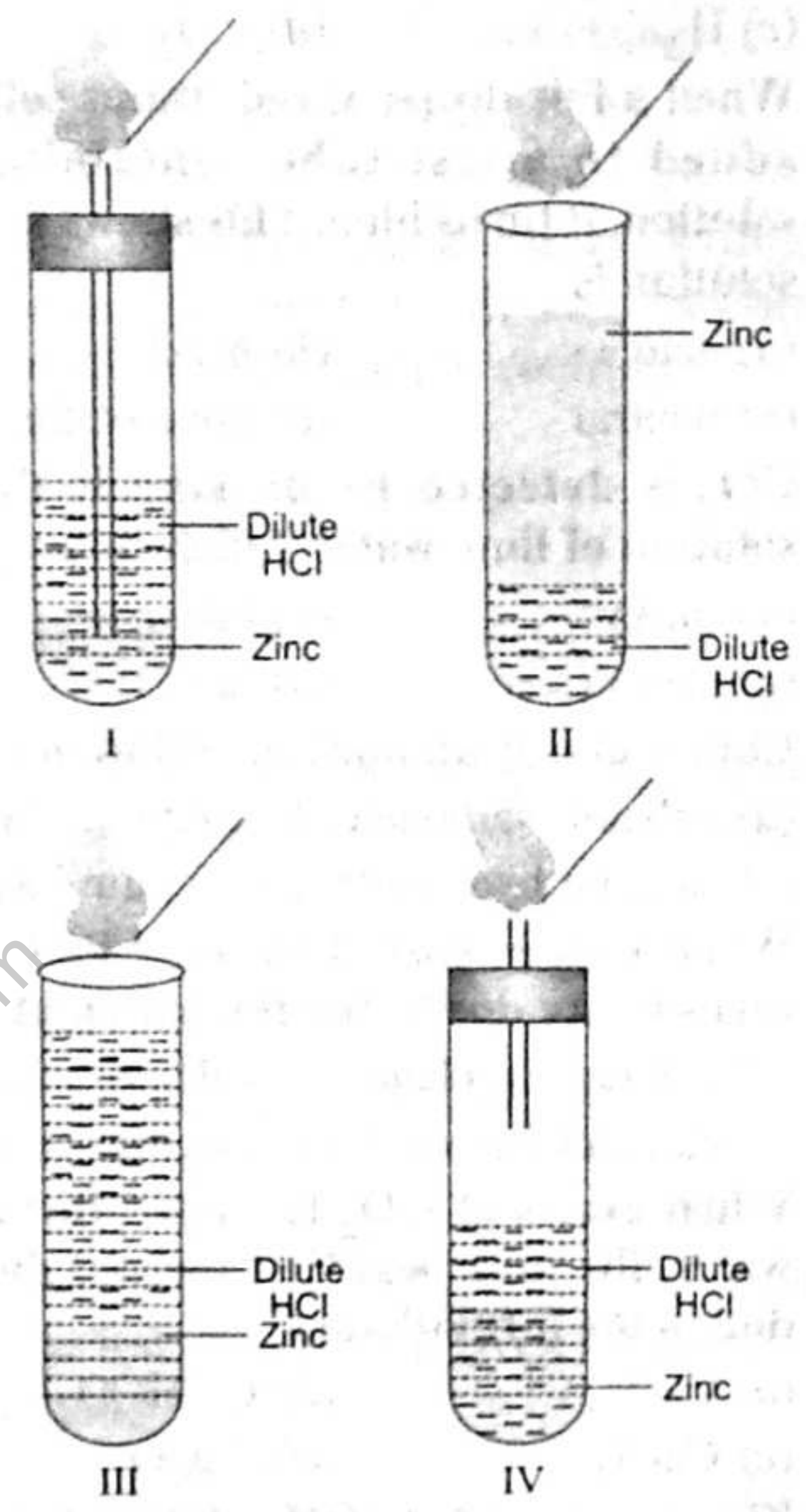
56. When dilute hydrochloric acid is added to granulated zinc placed in a test tube, the observation made is :
 (a) the surface of the metal turns shining
 (b) the reaction mixture turns milky
 (c) odour of chlorine is observed
 (d) a colourless and odourless gas evolves with bubbles
 (Practical Test 2008)

57. Which one of the following set-ups is the most appropriate for the evolution of hydrogen gas and its identification ?



- (a) I (b) II
 (c) III (d) IV
 (Practical Test 2008)

58. Four set ups as given below were arranged to identify the gas evolved when dilute Hydrochloric acid was added to Zinc granules. The most appropriate set up is :



- (a) I (b) II
 (c) III (d) IV
 (Practical Test 2008 OD)

59. A drop of colourless liquid was placed on blue litmus paper. The litmus paper turned red. The liquid could be :

- (a) dilute Hydrochloric acid
 (b) dilute Sodium hydroxide solution
 (c) distilled water
 (d) Sodium bicarbonate solution
 (Practical Test 2008 OD)

ANSWERS

56. (d) 57. (b) 58. (d) 59. (a)

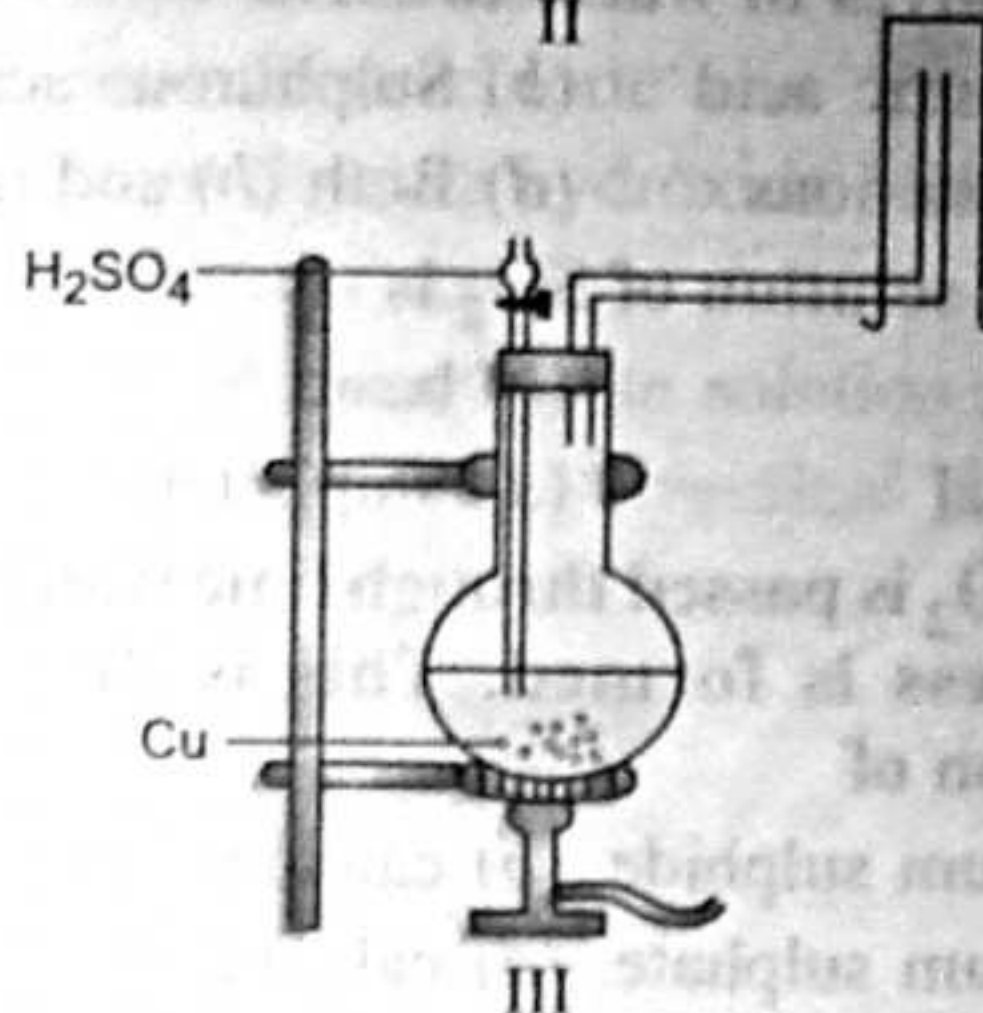
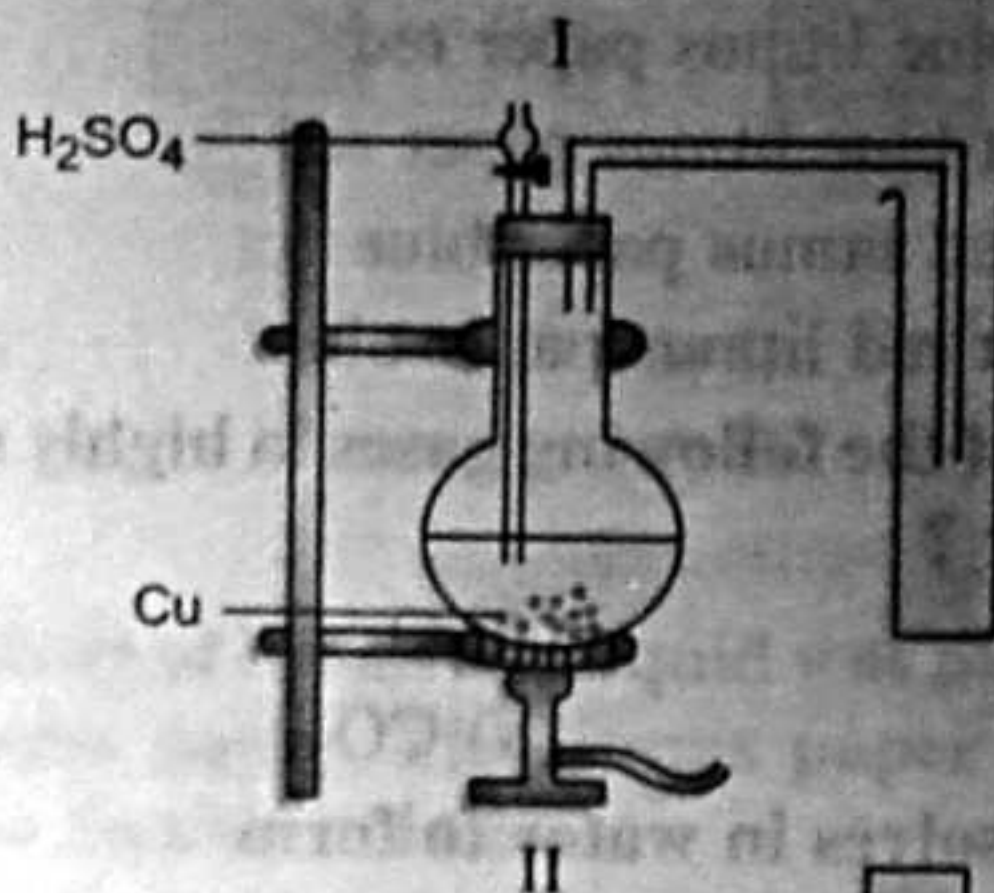
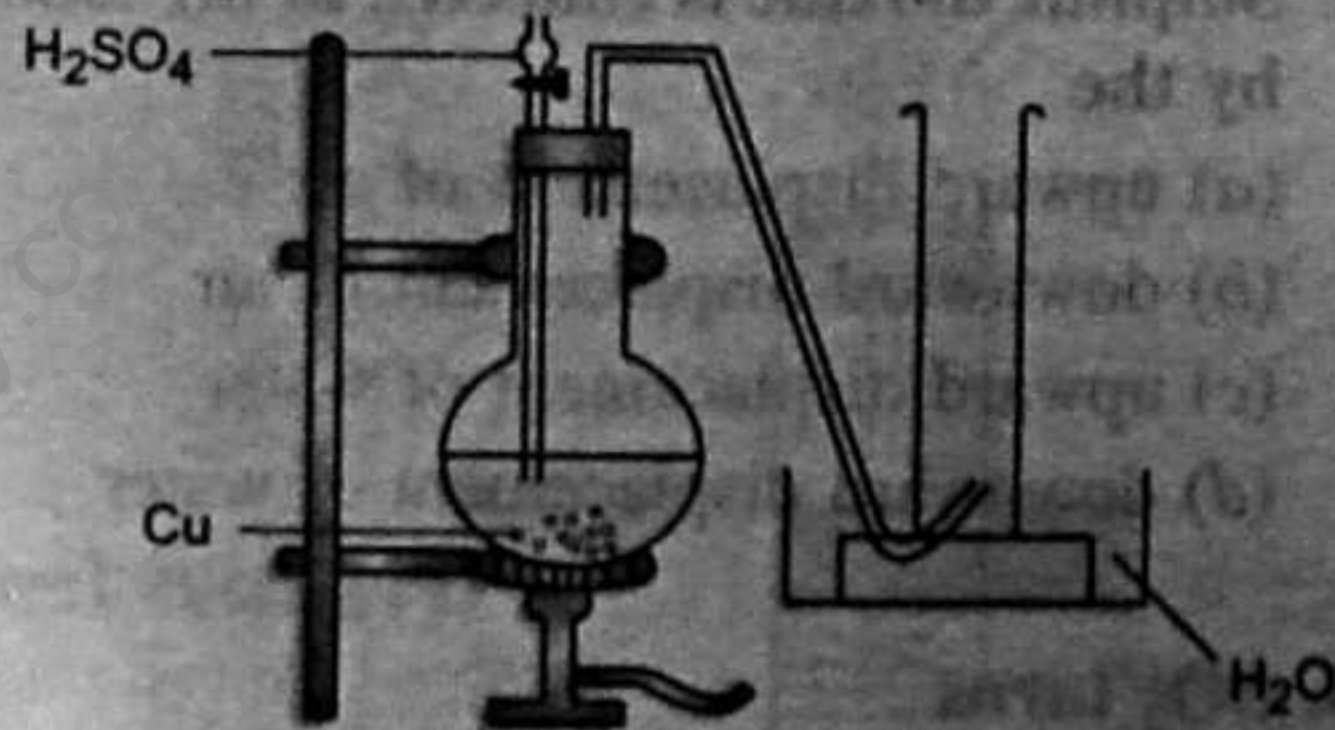
Experiment 3. To prepare sulphur dioxide gas, observe its following properties and draw inferences in respect of (i) odour (ii) solubility in water (iii) effect on litmus paper and (iv) action of acidified potassium dichromate.

60. To prepare sulphur dioxide in the laboratory, we heat copper turnings with
 (a) conc. HCl (b) conc. H_2SO_4
 (c) conc. HNO_3 (d) dil. H_2SO_4 .
61. During reaction of copper metal with conc. H_2SO_4 , H_2SO_4 is reduced to
 (a) H_2O (b) SO_2
 (c) SO_4^{2-} ion (d) SO_3 .
62. When copper turnings are heated with conc. H_2SO_4 , copper metal is converted into
 (a) $\text{Cu}(\text{OH})_2$ (b) CuO
 (c) CuSO_4 (d) CuSO_3 .
63. Sulphur dioxide is collected in the laboratory by the
 (a) upward displacement of air
 (b) downward displacement of air
 (c) upward displacement of water
 (d) downward displacement of water
 (Practical Test 2007)
64. SO_2 turns
 (a) dry blue litmus paper red
 (b) moist blue litmus paper red
 (c) dry red litmus paper blue
 (d) moist red litmus paper blue.
65. Which of the following gases is highly soluble in water ?
 (a) SO_2 (b) O_2
 (c) H_2 (d) CO_2 .
66. SO_2 dissolves in water to form
 (a) Sulphuric acid (b) Sulphurous acid
 (c) Sulphite ions (d) Both (b) and (c).
67. Aqueous solution of SO_2 is
 (a) acidic (b) basic
 (c) neutral (d) amphoteric.
68. When SO_2 is passed through lime water, white cloudiness is formed. This is due to the formation of
 (a) calcium sulphide (b) calcium sulphite
 (c) calcium sulphate (d) calcium bisulphate.
69. Which of the following is/are dibasic acids ?
 (a) Sulphurous acid (b) Sulphuric acid
 (c) Hydrochloric acid (d) both (a) and (b).
70. The molecular formula of potassium dichromate is
 (a) $\text{K}_2\text{Cr}_2\text{O}_7$ (b) K_2CrO_4
 (c) KMnO_4 (d) K_2MnO_4 .
71. The colour of potassium dichromate is
 (a) yellow (b) pink
 (c) orange (d) green.
72. A student prepared a gas in the laboratory and passed it through an acidified solution of potassium dichromate. The orange colour of the solution turned green. The gas is
 (a) CO_2 (b) SO_2
 (c) H_2 (d) O_2 .
73. Sulphur dioxide turns acidified potassium dichromate solution green. This means that sulphur dioxide is a
 (a) reducing agent (b) oxidising agent
 (c) dehydrating agent (d) none of the above.
74. During the reaction of sulphur dioxide with acidified solution of potassium dichromate, potassium dichromate acts as a/an
 (a) reducing agent (b) oxidising agent
 (c) dehydrating agent (d) none of the above.
75. Acidified potassium dichromate oxidises sulphur dioxide to
 (a) sulphur (b) sulphuric acid
 (c) sulphurous acid (d) sulphite ion.
76. Sulphur dioxide reduces potassium dichromate solution acidified with dilute sulphuric acid to
 (a) chromium (II) sulphate
 (b) chromium (IV) sulphate
 (c) chromium (III) sulphate
 (d) chromium (VI) sulphate.
77. SO_2 acts as a reducing agent only when
 (a) it is moist (b) it is dry
 (c) in aqueous solution
 (d) Both (a) and (c).

ANSWERS

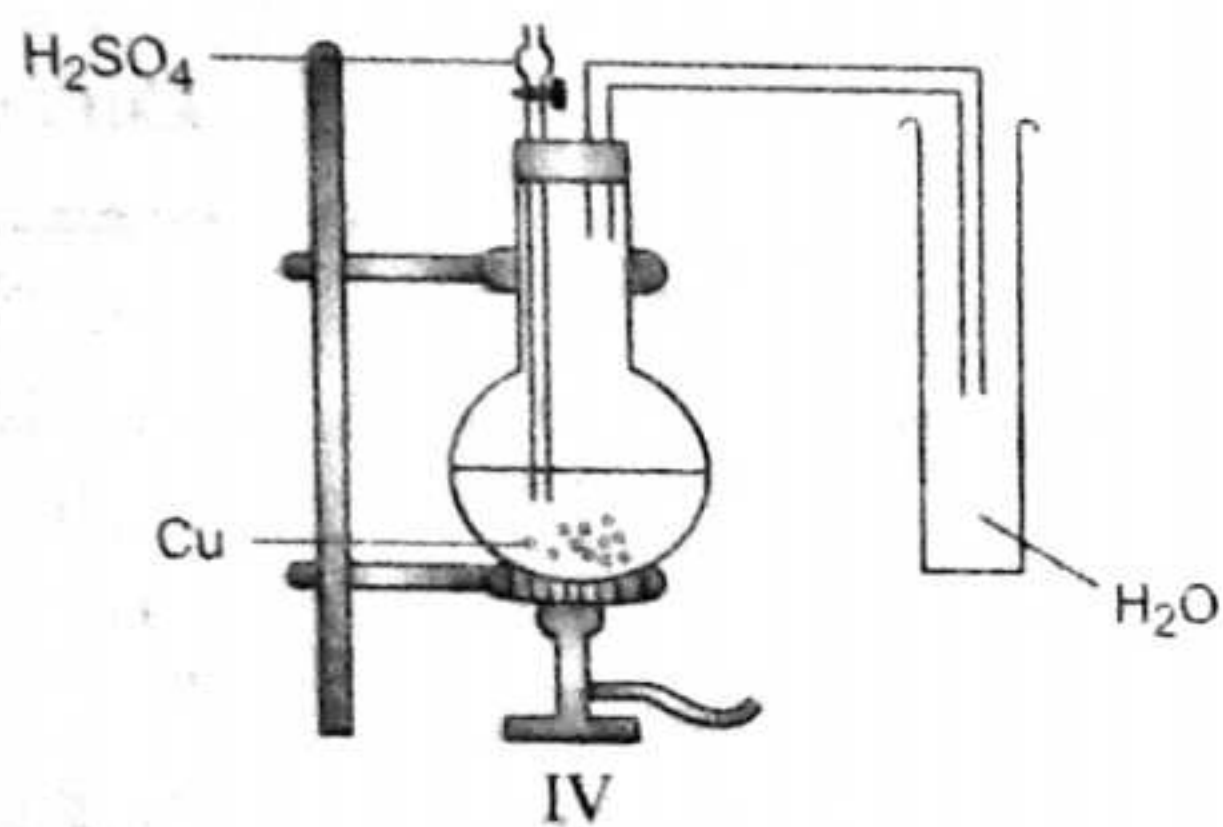
60. (b) 61. (b) 62. (c) 63. (a) 64. (b) 65. (a) 66. (d) 67. (a) 68. (b) 69. (d)
 70. (a) 71. (c) 72. (b) 73. (a) 74. (b) 75. (b) 76. (c) 77. (d)

78. When red petals of rose are added to a jar of sulphur dioxide, they become
 (a) orange (b) blue
 (c) colourless (d) black.
79. SO_2 bleaches coloured substances by
 (a) reduction
 (b) removing oxygen from coloured substances
 (c) oxidation (d) Both (a) and (b).
80. SO_2 is known to cause air pollution because
 (a) it is fairly poisonous and causes inflammation of lungs
 (b) it causes acid rain
 (c) it damages metal structures, buildings and plants
 (d) all of the above.
81. Sulphurous acid cannot be found on the laboratory shelf because
 (a) being a weak acid it decomposes readily to form SO_2 and H_2O
 (b) it is extremely corrosive
 (c) it emits poisonous fumes
 (d) none of the above.
82. A pungent smelling gas which turns lime water milky is
 (a) CO_2 (b) SO_2
 (c) NH_3 (d) H_2 .
83. The pink colour of acidified KMnO_4 solution disappears when SO_2 is passed through it. Which of the following statements about this reaction is not correct ?
 (a) SO_2 acts as a reducing agent
 (b) KMnO_4 acts as an oxidising agent
 (c) KMnO_4 is reduced to MnSO_4
 (d) SO_2 acts as a bleaching agent.
84. Which of the following reagents can be used to distinguish sulphurous acid from sulphuric acid ?
 (a) Blue litmus solution
 (b) Sodium bicarbonate solution
 (c) Acidified potassium dichromate solution
 (d) Any of the above reagents.
85. Which of the following gases are responsible for acid rain ?
 (a) SO_2 (b) NH_3
 (c) CO (d) CO_2
86. When acidified potassium dichromate solution is added to a jar containing sulphur dioxide gas, the solution becomes ?
 (a) colourless (b) brown
 (c) dark orange (d) green
 (Practical Test 2007)
87. When a test tube full of SO_2 gas is inverted in a trough of water, it is observed that water
 (a) rises slowly in the test tube to about 1 cm height
 (b) rises slowly in the test tube to about 5 cm height
 (c) rushes in the test tube to about 10 cm height
 (d) rushes in the test tube and almost completely fills it.
 (Practical Test 2007 C)
88. To prepare and collect SO_2 gas in the school laboratory, the correct set up is represented in the figure :



ANSWERS

78. (c) 79. (d) 80. (d) 81. (a) 82. (b) 83. (d) 84. (c) 85. (a) 86. (d) 87. (d)



- (a) I (b) II
(c) III (d) IV

(Practical Test 2007 C)

89. Sulphur dioxide gas was tested with moist blue litmus and red litmus papers. Sets of observations recorded by four students I, II, III and IV are given below in which the (\checkmark) indicates a colour change whereas (\times) indicates no colour change.

Blue Litmus	Red Litmus
\checkmark	\checkmark

I

Blue Litmus	Red Litmus
\times	\checkmark

II

Blue Litmus	Red Litmus
\checkmark	\times

III

Blue Litmus	Red Litmus
\times	\times

IV

which one observation is correct ?

- (a) I (b) II
(c) III (d) IV

(Practical Test 2007 C, OD)

90. A moist litmus paper is introduced in a gas jar containing a gas. After some time, the paper becomes colourless. The gas present in the jar is

- (a) Hydrogen
(b) Carbon dioxide
(c) Sulphur dioxide
(d) Ammonia

(Practical Test 2007 C, OD)

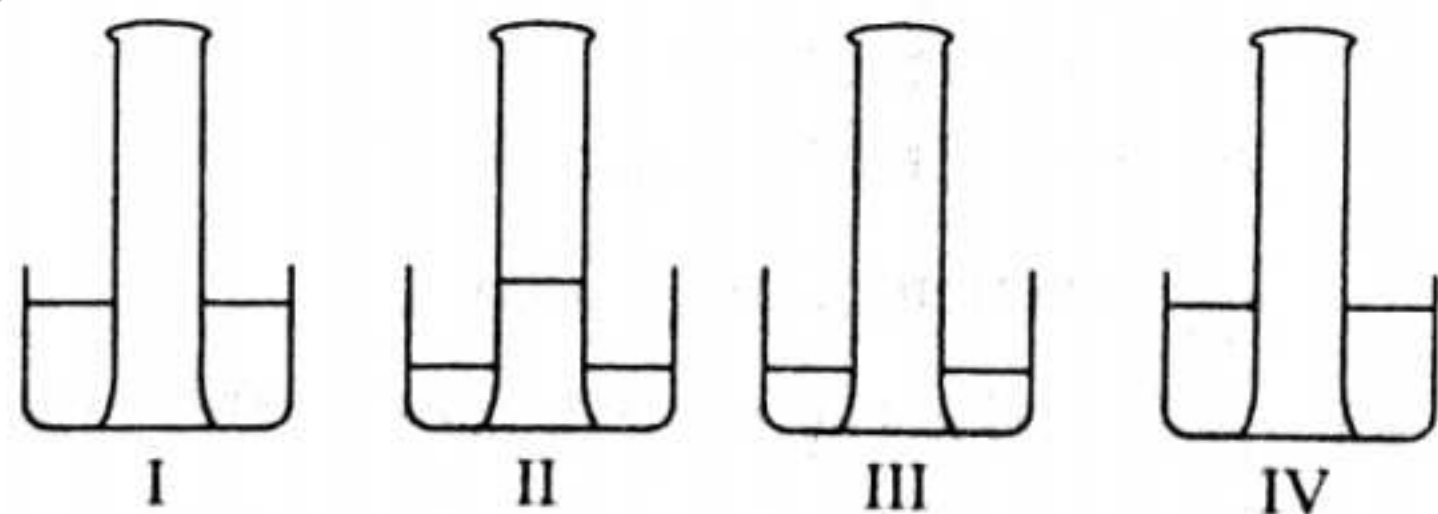
91. The description which most approximately suits sulphur dioxide gas is that it is colourless and

- (a) insoluble in water
(b) has pungent and suffocating odour
(c) lighter than air
(d) has smell of rotten eggs

(Practical Test 2008)

92. Four gas jars filled with sulphur dioxide gas were inverted into troughs of water by four students and the following observations and inference were reported :

- I. Water did not enter the gas jar and sulphur dioxide is insoluble in water.
II. A small amount of water entered the gas jar slowly and sulphur dioxide is sparingly soluble in water.
III. Water rushed into the gas jar and sulphur dioxide is highly soluble in water.
IV. Water did not enter the gas jar and sulphur dioxide is soluble in water.



The correct set of observations and inference drawn is reported in

- (a) I (b) II
(c) III (d) IV

(Practical Test 2008)

93. When Sulphur dioxide gas is passed through acidified Potassium dichromate solution, the colour of the solution changes from :

- (a) orange to yellow
(b) orange to green
(c) green to orange
(d) yellow to green

(Practical Test 2008 OD)

94. Which two equipments would you choose to prepare and collect Sulphur dioxide gas in the laboratory ?

ANSWERS

88. (b) 89. (c) 90. (c) 91. (b) 92. (c) 93. (b)