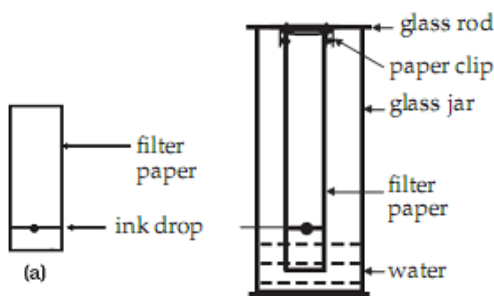


**Kerala State Board
Class IX Chemistry
Sample Paper – 1****Time: 1½ hrs****Total Marks: 40****Instructions:**

1. First 15 minutes are allowed as cool off time. During this period, read and comprehend the questions well.
2. Answer all questions.
3. Write all the sub-sections of the choice you selected.
4. Score of each question is given against them.

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1. Differentiate between acids and bases on the basis of
 - (a) Lewis theory [1]
 - (b) Arrhenius theory [1]
 2. Which separation techniques will be applied for the separation of the following? [3]
 - (a) Butter from curd
 - (b) Iron and sand
 - (c) Tea leaves from tea
 - (d) Grain from husk
 - (e) Ammonium chloride and sodium chloride
 - (f) Mud particles suspended in water
 3. Some situations from our daily life are given below. Classify them into greater cohesion force and greater adhesion force. [2]
 - i. Wet clothes stick to the body
 - ii. Small insects stick to oily paper
 - iii. Water is poured in a taro leaf
 - iv. Pressing wet glass plates together and then attempting to separate them
 4. CO₂ is one of the main carbon compounds in the atmosphere. [2]
 - (a) How is CO₂ prepared in the laboratory?
 - (b) How do we detect the presence of CO₂ gas?

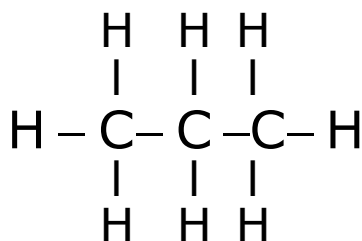
5.



Answer the questions given below based on the diagram above:

- (a) What is the name of this separation technique? [1]
- (b) What is the principle behind this technique? [2]
- (c) Can this method be used to separate components of chlorophyll? [1]

6. Given below is the structural formula of propane.



- (a)
 - i. What kind of bond exists between the carbon atoms?
 - ii. Write the common name and general formula of such compounds. [2]
- (b) Write the structural formula and the name of the compound with three carbon atoms and a triple bond between one pair of carbon compounds. [2]

7. Electron configuration of the elements A, B, C and D are given below.

A - 2, 8

B - 2, 8, 3

C - 2, 3

D - 2, 8, 1

- (a) How many of them belong to the same period? [1]
- (b) Which belong to the same group? [1]
- (c) Which is the noble element? [1]
- (d) Which element has the maximum valency and which has the minimum? [1]

8. 'Chlorine and its compounds are always a problem to mankind'. Give two arguments each to oppose and support this statement. [3]

9. What happens when HCl is added to KMnO_4 ? Why is sulphuric acid added during the experiment? Which gas is produced? Give any one use of the gas. [4]

10. When NaOH reacts with HCl, NaCl is formed. If sulphuric acid is used instead of hydrochloric acid (HCl) in the reaction, in what ways will the reaction take place? Write the chemical equations for the reactions. [3]
11. The elements in the periodic table in between group 3 and group 12 are called transition elements. Why? What are starting and ending elements of the first transition series? [2]
12. 'We can easily move our hand in the air but not through any solid material'. Justify the statement giving any three possible reasons. [3]
13. An incomplete model of the periodic table is given below. Examine it and answer the questions given below.

	1																18	
1		2											13	14	15	16	17	
2	A												E				G	
3															H			I
4	B							C		D								J

- (a) Which element has the biggest atom? [1]
- (b) Which are the transition elements? [1]
- (c) Which are the noble gases? [1]
- (d) Which element has the highest electronegativity? [1]