

First Terminal Examination 2012

Chemistry

Standard : IX

 Score : 40
 Time : 1½ hour
Instructions

1. 15 minute is given as cool off time. This time is to be used for reading and understanding the questions
2. Write answers for all questions
3. The score for each question is given along with the question

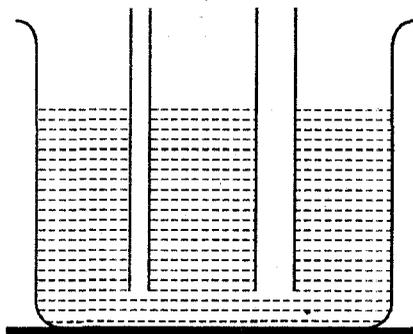
1/ (1) From the statements given below, choose those applicable to liquids. (2)

- (a) Have neither definite shape nor definite volume
- (b) Have definite volume, but adapt to the shape of the container.
- (c) Molecules are free to move as they like.
- (d) Even though the molecules are free to move, they cannot cross over the surface.

(2) Small drops of liquids attain spherical shape.

- (a) Which phenomenon is behind this? (1)
- (b) Based on this phenomenon, give the reason for liquid drops attaining spherical shape. (2)

1/ (3) The figure shows two glass tubes having different diameters dipped in a liquid.



- (a) Copy the figure and mark the liquid levels in the two tubes correctly. (2)
- (b) Name this phenomenon. (1)
- (c) Give any one instance in our daily life where we can utilize this phenomenon. (1)

4) Fill up the following table suitably (3)

	Liquid changing to solid	Liquid changing to gas
Molecular movement		
Distance between molecules		
Attraction among molecules		

5) From the statements given below, choose those applicable to mixtures. (1)

- (a) Contain more than one component. (1)
- (b) Mixtures are formed through chemical changes. (2)
- (c) Components retain their characteristic properties. (2)
- (d) Components cannot be separated by physical methods. (2)

6) Of the two similar narrow glass tubes one is dipped in water and the other in mercury. (1)

- (a) Draw a diagram for this experiment and mark the liquid levels in the two tubes. (2)
- (b) Clarify the reason for the liquid levels in the two tubes being different. (2)

7) Fill up the table after identifying A, B, C and D. (4)

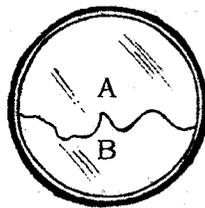
Mixtures	Method of separating the components	The property that is made use of
Iron powder + sand	A	One component is magnetic
Water + alcohol	Distillation	B
Water + kerosene	C	Immiscible liquids
Crude oil	D	Only small difference in the boiling points of the components

8) (a) How is cream separated from milk? (1)

(b) What is the reason for using this method? (1)

(c) Give another instance where the same method is used. (1)

- (9) The given picture depicts the soap film obtained by dipping a ring, tied with a string, in soap solution.



- (a) Pictorially represent what is observed when that part of the film marked A is pierced with a needle. (2)
- (b) Justify the figure drawn by you. (2)
- (10) (a) What is the method used to separate the coloured ingredients of a mixture? (1)
- (b) Write the procedure of an experiment used to separate the ingredients of black ink. (3)
- (11) The components of air and their boiling points are given in the table.

Component	Boiling point
Oxygen	-183°C
Argon	-186°C
Nitrogen	-196°C

- (a) Which among these liquefies first when air is cooled? (1)
- (b) Which component distils out first from liquefied air? (1)
- (c) What is the method used to separate the components from air? (1)
- (12) Some situations are cited below.

(i)	A wet paper sticks to the wall
(ii)	A wax paper is not wetted when immersed in water
(iii)	By using chalk we can write on the board
(iv)	Mercury dropped on a glass plate cannot wet it

- (a) Examine these situations and classify them according to stronger adhesive force and stronger cohesive force. (2)
- (b) Explain the terms adhesion and cohesion (2)