CHEMISTRY

TIME : 40 Minutes SCORE : 20

Attempt any three of the following question from 1-4 (score 1 each)

1. Which method is used to separate the components of a mixture with slight variation in their boiling points

   (Distillation, Chromatography, Fractional distillation, Sublimation)

2. Which among the following does not need any space to occupy

   a)Wooden block b)Air c)Light d)Kerosene

3. Choose the correct statement from the following

   i) The symbol of potassium is P.

   ii) Sodium is a monoatomic molecule.

   iii) Carbon dioxide is a mixture.

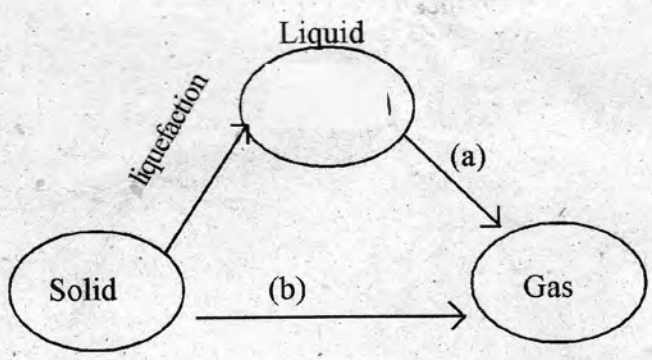
   iv) The symbol of the element Titanium is derived from the name of a country.

4. Select the element which got its name from its colour.

   a)Curium b)Indium c)Europium d)Polonium

Attempt any three of the following questions from5-9(score 2 each)

5.



The figure shows the changes of states. Analyse the figure and find the names of the process (a) and (b)

6. Fill in the blanks

Element	Basis of naming	Symbol
....(A).....	English name	Ca
Copper	Latin name	.....(B).....

7. The Apparatus shown in the figure is used to separate the components from a mixture.

a) Name the apparatus shown here.
b) From the given mixtures which one can be separated by using this apparatus.
(Muddy water, Ammonium chloride and sand, Mixture of ethanol and methanol, Mixture of water and kerosene)

8. Oxygen is a diatomic molecule.By using the symbol of Oxygen how can you represent two oxygen atoms and one oxygen molecule?

9. By using the given materials,design an experiment to show that air needs space to occupy. [Materials: Beakers (large and small),Water]

Attempt any three of the following questions from10-13(score 3 each)

10.Complete the table.

	change of solid into iquid	change of gas into liquid	change of liquid into solid
Ability for movement of particles	.....(a).....	Decreases	.....(b).....
Space between the particles	Increases	.....(c).....	.....(d).....
Energy of particles	.....(e).....	.....(f).....	Decreases

11. Analyse the given molecules and answer the following questions

A . $7NH_3$ B .$5H_2O$

a)Find the number of molecules in A and B
b)Find the total number of atoms in $7NH_3$
c)Find the total number of Oxygen atoms in $5H_2O$

12. Black ink in a sketch pen is a mixture.
i) Which method is used to separate components from this mixture?
ii) Write the procedure for this experiment.
iii)Suggest another example where this method is used to separate the compounds of a mixture.

13. $4Na + O_2 \rightarrow 2Na_2O$
a) Write the names of the reactants present in this chemical reaction.
b) Find out monoatomic and diatomic elements in this equation.
c) Which is the compound present in this chemical equation?