**Q/ Define the followings:**

. Distillation, Boiling Point, Extraction, Recrystallization, Melting Point

**Q/ Fill the blanks with appropriate answer:**

1. The principle of extraction is based on the relative solubility of the solute compound in …………. layer versus ……………. layer.
2. Partition coefficient also known as ………… and its equation is ………….
3. Steam distillation is a special type of distillation for temperature sensitive materials which are immiscible with water, like ……………. compounds.
4. Distillation is used for the ……………. and ……………. of organic compounds.

**Q/ Choose the correct answer:**

1. Simple distillation is used for separation of organic compound liquid having difference in boiling points by

a- 50 ⁰C b- 45 ⁰C c- 55 ⁰C

1. The process used in the separation of orange oil
2. Simple distillation b- Steam distillation c- vacuum distillation
3. Purification of solid organic compounds are performed by

a- recrystallization b- simple distillation c- extraction

4- Purification of liquid compound is carried out by

a- recrystallization b- distillation c- extraction

1. The symbol of Partition coefficient:

a- C b- D c- P

**Q/ Answer the following:**

1-Write the characteristics of solvent choose used of the purification of solid organic compounds?

a-

b-

c-

1. Enumerate the type of distillation?

a-

b-

c-

1. Write disadvantages of ether?

a-

b-

c-

1. The characteristics of solvent choose used of the extraction?

a-

b-

1. Draw the simple distillation apparatus?

**Q\ Define the following:**

1. Pure Caffeine 2. Recrystallization 3. Distillation 4. Extraction

5. Fertilizer

**Q\ Draw Simple Distillation and write the name of the parts.**

**Q\ Fill in the following blanks:**

1. Alkaloid is a class of naturally occurring compounds containing ……….. and having the properties of an amino acid.
2. In carboxylic acid, the carboxyl group hold …….. , but in an ester carboxyl group hold ………
3. Inorganic fertilizer releases a greenhouse gas called ………..
4. Distillation is used for ……… and ……….. of organic compounds.

**Q\ Answer the following questions:**

1. How do you increase the rate of ester?
2. What are the advantages of organic fertilizers?
3. What are the disadvantages of ether?

**Q\ Complete the following equations:**

1. RCO2H + NH4OH →
2. RCH2OH → RCO2H
3. HNO3 + NH3 →