

FINAL- TERM EXAMINATION

Class: Senior II
Chemistry
Max marks 15

Subject:
Time: 1hr

Paper I

What happen when a metal is placed in dilute acid?

- a. Salt and oxygen
- b. Salt and water
- c. Salt and hydrogen
- d. Salt and carbon dioxide

1. **When two liquid are mixed, a solution of pH 7 is formed. Which of the following two liquids will be mixed?**

1st Liquid pH	2nd Liquid pH
5	2
5	12
6	1
14	7

2. **Alkali are the metal hydroxides which are;**

- a. Soluble bases
- b. Insoluble bases
- c. Neutral bases
- d. Un reactive bases

3. **pH of normal rain water is;**

- a. 5
- b. 6
- c. 7
- d. 8

5. **The suitable solvent oil based paint is;**

- a. Kerosene
- b. Alcohol
- c. Turpentine
- d. Benzene

6. **The intermediate substance of a solution and suspension is called;**

- a. Residue
- b. Amalgam
- c. Filtrate
- d. Colloid

7. **The best indicator to identify the substance whether it is acidic or alkaline;**

- a. Universal indicator
- b. Methyl orange
- c. Phenolphthalein
- d. Litmus

8. **Which one of the following is not Alkali?**

- a. Sodium hydroxide
- b. Potassium hydroxide
- c. Aqueous ammonia
- d. Sulphurous

9. **670 cm³ of solution is equal to;**

- a. 0.67 dm³
- b. 0.067 dm³
- c. 6.70 dm³
- d. 67.0 dm³

10. **Which two solutions would produce a neutral solution when mixed together in equal volume?**

Solution	I	II	III	IV	V
pH	4	5	6	9	10

- a. II and III
 - b. II and V
 - c. II and IV
 - d. III and IV
11. **A mixture in which the tiny bits of substance spread evenly through out the liquid which are too small to be seen are called;**
- a. Suspension
 - b. Solution
 - c. Solubility
 - d. Dissolution
12. **The number of mole of Nitric acid in 0.05 dm³ of 2 Molar solution is;**
- a. 0.0001 mole
 - b. 0.001 mole
 - c. 0.01 mole
 - d. 0.1 mole
13. **Which one of the following is weak acid?**
- a. Hydrochloric acid
 - b. Sulphuric acid
 - c. Formic acid
 - d. Nitric acid
14. **Which one of the following is strong base?**
- a. Potassium hydroxide
 - b. Ammonium hydroxide
 - c. Alumunium hydroxide

d. Magnesium hydroxide

15. Which one of the following is not the physical property of an acid?

- a. They are corrosive
- b. They turns red litmus blue
- c. They make Phenolphthalein colourless
- d. They are good conductor

Paper II

Q1. The table below shows a range of soil pH that some vegetables and herb plants need for healthy growth. (Marks 4)

plants	pH range
Peas	6.0 - 7.5
Broccoli	6.0 - 7.0
Carrots	5.5 - 7.0
Potatoes	4.5 - 6.0
spaghetti	5.5 - 7.0
Leeks	6.0 - 8.0
Parsley	5.0 - 7.0
Mint	7.0 - 8.0

- i. Which plant grows in the most acidic soil? [1]
- ii. Which plants can grow in the most alkali soil? [1]
- iii. Which plants have the widest range of pH in which they can grow? [1]
- iv. If the soil has pH 5.5. What can a farmer add to this soil to increase its pH? [1]

Q2. Design your own experiment to show, how fast a solute can dissolve in a solvent. For this experiment you are provided sugar crystals and water. (Marks 3)

Q3. Write down the correct formula from List B in front of the solutions in List A. (Marks 3)

List A

- i. Sodium hydroxide
- ii. Hydrochloric acid
- iii. Ammonia

List B

- a. H_2SO_4
- b. HNO_3
- c. HCl

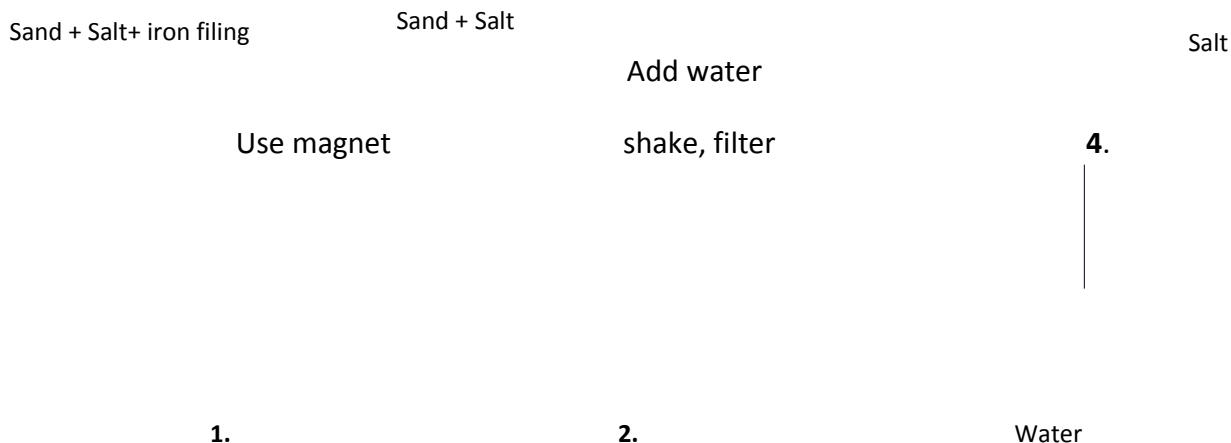
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- iv. Calcium hydroxide
- v. Sulphuric acid
- vi. Nitric acid

- d. NH_3
- e. $\text{Ca}(\text{OH})_2$
- f. NaOH

Q4. Complete the flow chart by filling in the boxes and labeling the arrow. (Marks 4)

3. ____ + ____



Q5. What would happens to a concentrated solution when; (Marks 2)

- i. A large amount of solute is added to it.
- ii. A large amount of solvent is added to it.

Q6. Five solutions A to E were tested with Universal indicator solution, to find their pH. The results are shown below. (Marks 5)

A

B

C

D



pH1

pH4

pH7

pH9

pH11

(a) What colour would each solution be?

[2]

Test tube A

Test tube B

Test tube C

Test tube D

Test tube E

(b) Which solution is according to above test tubes? Write the test tube number.

[2]

- i. Neutral
- ii. Strongly acidic
- iii. Weakly acidic
- iv. Strongly alkaline
- v. Weakly alkaline

Q7. 15 cm³ of Sodium hydroxide (NaOH) solution was measured in to a beaker. 30 cm³ of concentrated hydrochloric acid is added 1 cm³ at a time. The pH of the solution is measured after each addition.

(Marks 6)

- i. Define pH.
- ii. When no acid has been added, pH will be?
- iii. What would be the pH if 15 cm³ of acid has been added?
- iv. What would be the pH if acid has been added continuously up till 30 cm³?

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- v. What is this type of reaction called?
- vi. Name the salt formed during the reaction?

Q8. (a) What would happen if you keep on adding solute in a given amount of solvent at room temperature? Can you explain why? (Mark 1)

(b) What are the factors that affect the solubility of a solute in a solvent? (Marks 2)

Q9. Define with at least one example of each of the following; (Marks 10)

- i. Solvent
- ii. Residue
- iii. Aqueous solution
- iv. Amalgam
- v. Concentrated solution

Q10. Give one word answer. (Marks 3)

- i. How will be the pH effected when an alkali is added to an acid?
- ii. Name the reaction that will result in salt formation, other than Neutralization.
- iii. What colour would appear when phenolphthalein is added to an alkaline and acidic solution?

Q11. Write the best method for separating each of the following mixtures. You have to choose the methods from the box below. (Marks 4)

Decanting Chromatography Distillation Centrifuge

- i. Cream from milk
- ii. Impurities from crude oil

- iii. Alcohol from water
- iv. Blue ink from red ink

Q12. The table gives the colour of four different indicators in solutions of different pH.

(Marks

3)

- i. What is the colour of solution of pH 8 with a couple of drops of **Bromocresol green** indicator added?
- ii. A solution turns yellow when either **Methyl orange** or **Phenol red** is added. What is the approximate pH of the solution?
- iii. When **Methyl orange** and **Phenolphthalein** is added to pure water, what colour is the resulting solution?