

CHEMISTRY FORM 2 TERM 2 MARKING SCHEME

1.
 - a) Zinc
 - b) Copper (II) oxide
 - c) Copper (II) oxide
 - d) Zinc
 - e) Addition of oxygen to a substance
 - f) Removal of oxygen from a substance
2.
 - It turns white anhydrous copper (II) sulphate to blue
 - It turns blue cobalt chloride paper pink
3.
 - To add calcium as a mineral in the soil
 - To neutralize the acidity in the soil (6.5)
4.
 - Glass can be heated while plastic cannot
 - Glass apparatus allows one to make observation when doing an experiment ie they are visible from the side
 -
5.
 - Mix sand and salt with water
 - Filter the sand using a sieve and get sand as a residue
 - Evaporate the filtrate to dryness to obtain crystals of salt
6.
 - a)
 - It is a weak acid
 - b)
 - F
 - c)
 - Q
7.
 - a)
 - Iodine
 - b)
 - Sublimation
 - c)
 - To condense the hot iodine vapour
 - d)
 - Because iodine can sublime while sodium chloride cannot
 -
 - e)
 - Tripod stand
- 8.

- a)
- Sodium chloride
- b)
- Carbon (IV) oxide
- c)
- Sodium carbonate + hydrochloric acid \longrightarrow sodium chloride + carbon (iv) oxide + water
9.
a) – **Flame I**,
- Non-luminous flame; used less time to boil;
- **Flame II**,
- Luminous flame; used more time to boil;
- b)
- The beaker in flame II was black at the bottom; because of soot produced by the flame when the air hole is closed carbon burns in limited supply of oxygen
10.
- Distilled water boiled first; this because sea water has dissolved salts that act as impurities hence raising the boiling point;
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11.
a)
i. Water vapour
ii. Liquid air
iii. Oxygen
- b)
- Concentrated sodium hydroxide
- Concentrated potassium hydroxide
- c)
- Silica gel
- d)
i. Purification
ii. Fractional distillation
- e)
- Separation of the contents of crude oil
- f)
- They have different but close boiling points
12.
a)
- Burning hydrogen in presence of oxygen in air is explosive
- b)
- The black copper (II) oxide changed to brown
- The white anhydrous copper (II) sulphate turned blue
- c)
- To absorb the water vapour produced in the combustion tube;
- d)
- Reducing property;
- 13.

- In Mombasa county the environment is salty compared to Kisumu county; the salty environment speeds up the rate of rusting; in Kisumu the rusting process is not speeded by salty environment hence it is slow;
- 14.
- The bee sting injects acid to the affected part; ammonia is a base which neutralize the acidity which relieves off the pain;
- 15.
- Cut the tradescantia leaves and place them in a mortar;
 - Using a pestle crush the leaves to produce the juice;
 - Add propanone as you continue crushing;
 - Decant the extract in a beaker;
- 16.
- a)
- Calcium + water \longrightarrow calcium hydroxide + hydrogen gas
- b)
- The burning splint burns with a pop sound
- c)
- Hydrogen gas is produced which burns with a pop sound in air
- d)
- The solution turned pink; solution formed ie calcium hydroxide is an alkaline;
- e)
- 11, 12, 13, 14; the solution is an alkaline;
- 17.
- a)
- downward displacement of air; A- Upward delivery/
 B – Downward delivery/ upward displacement of air;
- b)
- dense than air/ they are lighter than air; A- They are less
 B – They are denser than air;
- 18.
- Initial volume of
 air = 200 cm³
 Final volume of air = 160 cm³
 Volume of air used= 40 cm³;
- Percentage volume of air = $\frac{\text{volume of air used}}{\text{Initial volume}} \times 100$;
 $= \frac{40}{200} \times 100 = 20\%$
 $= 20\%$;
- a)
- Carbon (IV) oxide;
 - Nitrogen;
- 19.
- Hydrochloric acid;
 - Nitric acid;

- 20.
- a) - Sulphuric acid;
 - b) - Galvanization;
 - Zinc is more reactive than iron and hence reacts with oxygen;