***CHEMISTRY FORM TWO OPENER MARKING SCHEME TERM ONE 2021***

1. a) F is place in the middle of the flame while G is placed at the upper region of the flame

2. b) Non- luminous flame

(i) P – Hexane

(ii) W – Water

3.a)i) Presence of water 🗸1 and air 🗸1

ii) - Painting

- Electroplating

- Greasing.

b) Rusting is escalated by salt in the sea water.

c) Zinc being more reactive than iron corrodes preferentially, protecting iron.



d)

i)

ii) By reducing the size of sodium peroxide particles

4. a) Fractionating column ½ b) Fractional distillation ½

(c) Condensation would not occur 1 (d) Differences in boiling points 1

5. B - strongly acidic ***1***

C - weakly acidic ***1***

D - strongly basic ***1***

6. a) A - melting ***1mark***

B - freezing ***1mark***

C - evaporation // boiling ***1mark***

D - condensation ***1mark***

E - Sublimation ***1mark***

F - Sublimation ***1mark***

***award 1 mark for each correct answer***

(b) Iodine

Ammonium chloride

Solid carbon (IV) oxide

***any two correct for two marks.***

c) i) Simple distillation // evaporation method ***1mark***

ii) Fractional Distillation of crude oil ***1mark***

7. - For the visibility of chemical reactions.

- For clear observation of the meniscus ***2mks***

8. Because flower extract decomposes with time and give inconsistent results when used ***2mks***

9. (i) Atomic number is the number of protons in the nucleus of an atom(1mark)

(ii) Mass number is the sum of the protons and neutrons in an atom of an element (1mark)

10. Place the mixture on a piece of paper and put a magnet 🗸1above the mixture to attract iron filings

* Heat the remaining part of the mixture for Al2Cl3 🗸1to sublime and collect sublimate.
* Calcium chloride will remain at the bottom of the tube.🗸1

11.)*(a) Zn(s) + 2HCl(aq) ZnCl2(aq) + H2(g) 1*

*(b) Concentrated sulphuric (VI) acid or anhydrous calcium chloride. 1*

*(c) Copper cannot displace hydrogen from its solution. 1*

*(d) (i) 2H2(g) + O2(g) 2H2O(l) 1*

*(ii) Before: Pass hydrogen / through the tube before lighting 1 to drive off air.*

*End: There should be a continuous flow of hydrogen after / putting off the flame*

*to avoid an explosion. 1*

*(e) – Filling balloons 1*

*- Manufacture of margarine.*

*- Manufacture of ammonia.*

*- Conversion of coal to synthetic petrol.*

12.) 12 neutrons