**LANJET F4 JOINT EXAMINATION – 2020**

**Kenya Certificate of Secondary Education**

**233/3 CHEMISTRY**

**PAPER 3**

**DECEMBER, 2020**

**PAPER 1 MARKING**

a) Table 1

Complete Table CT

Trends Td 

Decimal (D) 

Decimal- consistence in use of decimal on temperature readings 0.0,0, 0.5

Trends – constant, steady rise, constant then drop.

Complete table – if a candidate has filled the table a ward full mark.

ii Labelling and axis LA.½

Plots (p) 

Scale (s) ½

Extrapolation (ex) 

iii) T2-T1 = T

Highest temperature on extrapoliated graph

b) Complete table CT

Decimal D 

Accuracy (A) ±0.1

± 0.2½

Beyond ± 0.2 award 0mrk

Principles of averaging (P.A)

Values averaged must be within ± 02 of each.

Find answer F.A

b (ii) Molarities X titre value½

1000

Correct answer ½

II Moles ratio 1:1½

Answer in I ½

III Answer in II x 250 ½

25

Correct answer ½

IV Molarities acid x 50

1000

Correct answer 

V. Answer in IV – answer in III

Correct answer 

VIMoles ratio 1:2 ½

Answer in V/2

Correct answer½

C H = McØ

=50 x 4.2 x T.

= Correct answer 

Answer in C

Answer in VI

NB penalize ½ for missing sign and wrong unit.

2. i) White precipitate formed  Ca2+

Ba2+ Present. All = 

Pb2+  2=½

1 = 0

II NO white precipitate  Pb2+ Absent½

Ca2+ Present½

Ba2+

III No white precipitate SO42-

SO32- Absent 3 = 

CO32- 2 = ½

1 = 0

IV No white precipitate. Cl - Absent

SO42-

ignoreSO32- Absent

CO32-

ii) Shining aluminum foil dissolves forming grey solution  NO3- presents

Gas produce turn red litimus paper blue

Blue litmus remain blue

3. a) Burns with yellow sooty/ smoky flame C=C or – C ≡ C- Present

b) Solid dissolves on colorless solution ½ Polar compound ½

Polar organic substance.

i) PH3 strong acidic solution 

Reject strong acid.

ii) Purple potassium manganate vii turns colorless. C=C or – C ≡ C-

Reject solution turn colorless R- OH½ Present

iii)Orange bromine water turn colorless C=C or – C ≡ C- Present

