**WEITHAGA JOINT EXAM 2019**

**CHEMISTRY PP 233/3…………….MARKING SCHEME**

1(a) CT - 1 - table completed with realistic temperature readings

D.P - 1- 1 or 0 dips consistently used.

A - 1 1st reading => 2 of s

T 1 temperature increases then decreases.

(i) Plotting - 1

Scale - ½ plots cover at least half of the grid provided

Axes – ½ both axes correctly labeled.

Time (s)

Temperature (oC)

Temperature (oC)

Time (s)

Or

(ii) Peak temperature - temperature at O = ans (ii)

(iii) 40cm3 x 1.0gcm-3 x 4.2 x DT = ans (a) (iii)

(b) CT - 1

D.P - 1

A - 1

P.A - 1

F.A - 1

(c)(i) 25 x 0.3 = 0.0075

100

0.0075 = 0.00375

2

(ii) 250 x 0.000375 = ans c (ii)

Average volume

(iii) 40 x 0.5 = 0.02

1000

(d) 0.02 - ans c (ii) = ans (d)

(e) 1 x ans a (iii)

Ans (d)

DH = ans

2. a)

|  |  |
| --- | --- |
| **Observation** | **Inference** |
| - Colourless liquid ✓ 1mk/ forms on cooler part of the test – tube  -Red litmus paper change ✓ 1mk of blue and blue litmus paper remain unchanged | Hydrate salt ✓ 1mk  NH4+ions 1mk |

|  |  |
| --- | --- |
| **Observation** | **Inference** |
| b)i)  Solid dissolve in water to form a colourless solution ✓ 1mk | A soluble salt ✓ 1mk |

|  |  |
| --- | --- |
| **Observation** | **Inference** |
| ii) White precipitate ✓ 1mk does not dissolve | SO4-2 , Cl-(aq) ions  (1mk) |

|  |  |
| --- | --- |
| **Observation** | **Inference** |
| iii) White precipitate ✓ ½ mk does not dissolve ✓ ½ mk | SO­4-2 ✓ 1 mk |

|  |  |
| --- | --- |
| **Observation** | **Inference** |
| iv) Green precipitate does not dissolve ✓ 1mk | Fe+2(aq) ions ✓ 1mk |

|  |  |
| --- | --- |
| **Observation** | **Inference** |
| v)  Yellow solution formed ✓ 1mk | Fe+3(aq) ions 1mk |

3. a)

|  |  |
| --- | --- |
| **Observation** | **Inference** |
| Burns with a blue flame (1mks) | Saturated organic compound or  C C  (1mk) |

|  |  |
| --- | --- |
| **Observation** | **Inference** |
| b)i)  dissolve in water ✓ 1mk | A soluble compound / polar ✓ 1mk |

|  |  |
| --- | --- |
| **Observation** | **Inference** |
|  | =C = C =  R-OH present  (1mk) |

|  |  |
| --- | --- |
| **Observation** | **Inference** |
| d) Orange colour of potassium dichromate turns green ✓ 1mk | R-OH present  (1mk) |