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**CHEMISTRY**

**TERM 2 2019**

**PAPER 3**

**( CONFIDENTIAL)**

**In addition to the apparatus found in the laboratory each candidate will require the following;**

- About 0.5g of solid F
- About 1g of solid G
- 6 clean test-tubes
- Universal indicator solution and a pH chart
- Ethanol supplied with a dropper
- Clean dry metallic spatula
- 1 boiling tube
- Distilled water
- Solution J, about 130cm<sup>3</sup>
- Solution Q, about 160cm<sup>3</sup>
- Solution R, about 30cm<sup>3</sup>
- Screened methyl orange indicator
- Methyl orange indicator
- 100ml measuring cylinder
- Filter paper
- Means of labeling
- Solid P
- Thermometer
- 100ml beaker

***Access to the following;***

- ❖ Ethanol supplied with a dropper
- ❖ Concentrated sulphuric (VI) acid supplied with a dropper bottle
- ❖ Acidified Potassium dichromate (VI) solution
- ❖ Acidified Potassium Manganate (VII) solution.
- ❖ 2M Ba(NO<sub>3</sub>)<sub>2</sub> solution.
- ❖ 2M NaOH solution.
- ❖ 2M HCl acid.
- ❖ Source of heat.

### ***Preparation***

- ✓ Solution J is 0.12M HCL, prepared by adding about 800cm<sup>3</sup> of distilled water to 4.05cm<sup>3</sup> of concentrated HCL of density 1.08gcm<sup>-3</sup> and making it to one litre of solution.
- ✓ Solution Q is prepared by dissolving 5.3g of anhydrous sodium carbonate in enough distilled water and making up to one litre of solution.
- ✓ Solution R is prepared by dissolving 15.75g of hydrated barium hydroxide in enough distilled water and top up to one litre of solution.
- ✓ Solid P is 2.0g of oxalic acid weighed accurately and supplied in a stoppered container
- ✓ Solid F is maleic acid
- ✓ Solid G is sodium sulphite