**233/3 KASSUJET 2021 CONFIDENTIAL**

Apart from the usual laboratory fittings, each student should have the following;

1. About 0.5g of Solid Q in a stoppered container
2. About 0.5g of Solid R in a stoppered container
3. 100cm3 of solution R
4. 100cm3 of solution Q
5. 100cm3 of solution P
6. Distilled water.
7. About a spatula end-full of solid Calcium hydroxide
8. Red litmus paper
9. Three 250ml conical flasks
10. One burette 0 – 50ml
11. One pipette 25ml
12. One 50ml measuring cylinder
13. One 10ml measuring cylinder
14. One 250cm3 volumetric flask
15. Phenolphthalein indicator
16. Labels (2)
17. Stop watch
18. Two boiling tubes
19. One metallic spatula
20. Five test tubes on a test-tube rack
21. Wooden splint
22. Test tube holder

The student should also get access to;

1. 10% Hydrogen peroxide (freshly prepared + dropper).
2. 2M Barium nitrate solution + dropper.
3. 0.5M Hydrochloric acid + dropper.
4. Source of heat.
5. Sodium hydrogen carbonate
6. Acidified Potassium manganate (VII)
7. Acidified Potassium dichromate (VI)

**NOTES**

Solid Q is Hydrated ferrous ammonium sulphate.

Solid R is Malleic acid

Solution R is prepared by weighing exactly 4.8g of sodium carbonate dissolve it to make 1dm3 of solution.

Solution Q is prepared by weighing exactly 172cm3 of hydrochloric acid (35-37% sp.gr 1.18) and dissolving to make 1dm3 of solution.

Solution P is prepared by weighing exactly 37.2g of sodium thiosulphate pentahydrate and dissolving to make 1dm3 of solution.