**TRIAL EXAMINATIONS 2021**

**Kenya Certificate of Secondary Education (KCSE)**

**CONFIDENTIAL**

**232/3 - PHYSICS - Paper 3**

**Inst. Sch. (PRACTICAL)**

 **Nov/Dec. 2021**

**INSTRUCTIONS TO SCHOOLS**

1. The information contained in this paper is to enable the head of the school and the teacher in charge of Physics to make adequate preparations for this year’s Physics practical examination.

**No one else** should have access to this paper or acquire knowledge of its contents. Great care **must** be taken to ensure that the information herein does **not** reach the candidates either directly or indirectly.

1. The apparatus required by each candidate for the Physics practical examination are set out on paper 2. It is expected that the ordinary apparatus of a Physics laboratory will be available.
2. The Physics teacher should not that it is his/her responsibility to ensure that each apparatus acquired for this examination are per the specifications given.
3. The question paper should not be opened in advance.
4. The Physics teacher in not expected to perform the experiments.

**NB:**

* ***The Physics teacher must ensure that the laboratory is set up a day before the date of the examination.***
* ***Any use of apparatus other than the ones specified may lead to candidates being penalized.***
* ***The requirements for each question should not be written on the chalkboard on the day of the examination.***

**These instructions consists of 2 printed papers.**

**Each candidate will require the following:**

**Question 1:**

1. A rectangular glass block of dimension; 10.0 cm$×6.0cm×2.0cm$ (tolerance + or -0.2cm)
2. Four optical pins
3. Four paper pins or thumb pins
4. Protractor
5. Half metre rule

**Question 2:**

1. A glass beaker.
2. A metal solid (100g mass labelled S)
3. Some water.
4. Source of heat.
5. A piece of cotton thread.
6. A plastic beaker wrapped with tissue paper on the outside.
7. A thermometer.
8. Liquid L. (distilled water)
9. Measuring instrument for mass (to be shared)
10. A Nichrome wire SWG 38(diameter range 0.36-0.38mm)
11. A 20g mass
12. A metre rule
13. A test –tube
14. A retort stand, boss and clamp
15. Two cells and two cell holders
16. A 2.5 V torch bulb in a bulb holder
17. 10 Connecting wires
18. A Switch
19. Ammeter (0 –2.5A),
20. Voltmeter (0 – 5 V)

**THIS IS THE LAST PRINTED PAGE.**