THE KENYA NATIONAL EXAMINATIONS COUNCIL
Kenya Certificate of Secondary Education

CONFIDENTIAL

232/3 Inst. Sch. — **PHYSICS** — **Paper 3**

(PRACTICAL)

Nov. 2019

INSTRUCTIONS TO SCHOOLS

B03

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.

2. The apparatus required by each candidate for the Physics practical examination are set out. It is expected that the ordinary apparatus of a Physics laboratory will be available.

3. The **Physics teacher** should note that it is his/her responsibility to ensure that each apparatus acquired for this examination agrees with the specifications given.

4. The question paper will not be opened in advance.

5. The **Physics teacher is not** expected to perform the experiments.

NB:

A008

- ***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 penalised.***
- ***The requirements for each question should not be written on the chalkboard on the day of the examination.***

These instructions consist of 2 printed pages.

Each candidate will require the following:

Question 1

1. A stand, a boss and a clamp
2. A thermometer (of range −10 °C to 110 °C)
3. An ammeter (of range 0 – 1 A.)
4. A voltmeter (of range 0 – 3 V or 0 – 5 V)
5. A source of boiling water (to be shared)
6. A stirrer (may use a glass rod)
7. A switch
8. Seven connecting wires at least three with crocodile clips at one end
9. Two new size D dry cells in a cell holder.
10. A thermistor of specification **MF72BD11 (or equivalent)** of resistance approximately 5 Ω to 10 Ω at room temperature labelled **X.** (The terminals of the thermistor should be attached to crocodile clips see **figure 1)**
11. One 250 ml beaker.

803

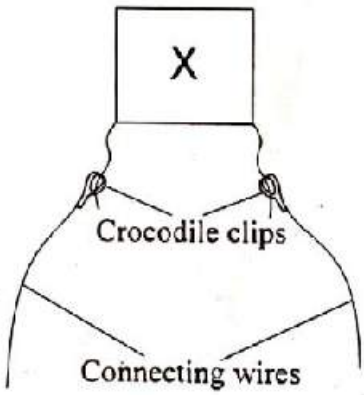

Figure 1

Question 2

A008

1. One metre rule
2. One stand, one boss and one clamp
3. One 20 g mass (the cylindrical hooked type).
4. One 50 g mass (or a combination that adds up to 50 g)
5. One piece of string of length approximately 30 cm.
6. Two pieces of strong sewing thread of length approximately 30 cm.
7. Approximately **17 ml** of water in a **25 ml** measuring cylinder.
8. A concave mirror of focal length 10 ± 1 cm
9. A white screen at least 18 cm tall.
10. A piece of candle approximately 9 ± 1 cm
11. A mirror holder (a lens holder may be used)
12. A match box (to be shared)