**CONFIDENTIAL**

**232/3 Inst. Sc.**
**PHYSICS**
**(PRACTICAL)**
**Paper 3**
**Oct./Nov. 2015**

**THE KENYA NATIONAL EXAMINATIONS COUNCIL**
**Kenya Certificate of Secondary Education**
PHYSICS
**(PRACTICAL)**
**Paper 3**

**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.*

2. *The apparatus required by each candidate for the Physics practical examination are set out on page 2. 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 specification on page 2.*

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

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

*N.B.*
- ***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.***

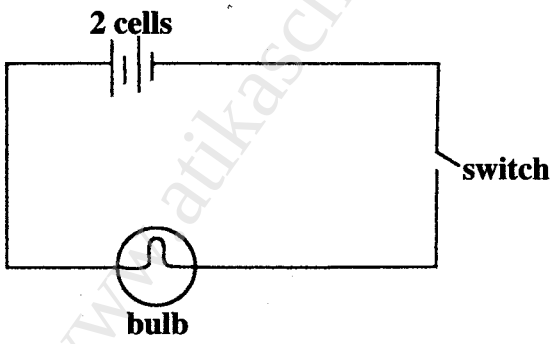
**These instructions consist of 2 printed pages.**

**Instructions**

Each candidate will require the following:

**Question One**

- a metre rule
- 100 ml glass beaker
- about 100 $cm^3$ clean water
- a stand boss and clamp
- a stop watch
- a screen
- a measuring cylinder (100 ml)
- a micrometer screw gauge (to be shared if necessary)
- a vernier calliper (to be shared if necessary)
- a glass tube of external diameter 6 mm and length 10 cm
- a nichrome wire labelled **M** approximately 65 cm long and diameter 0.35 mm **should be provided for each candidate.**
- some sellotape (5 cm long)
- one 50 g mass
- one 40 g mass (or two 20 g masses) (any combination to give 40 g)
- a lighting circuit connected as shown below, ready for the candidate to switch on




(use two cells, a cell holder, a switch and a 2.5 V bulb)

**Question Two**

- a nichrome wire labelled **L** of length 100 cm and diameter 0.30 mm mounted on a millimetre scale
- a micrometer screw gauge (to be shared if necessary)
- six connecting wires at least four with crocodile clips
- an ammeter (range 0 - 2.5 A)
- a voltmeter (range 0 - 5 V)
- two new dry cells (size D)
- a cell holder
- a switch