

CONFIDENTIAL
THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL
CERTIFICATE OF SECONDARY EDUCATION EXAMINATION

NOVEMBER 2017

031/2A

PHYSICS 2A
ACTUAL PRACTICAL A

24 HOURS ADVANCE INSTRUCTIONS

1.0 IMPORTANT

- 1.1 GREAT CARE MUST BE TAKEN NOT TO DIVULGE THIS INFORMATION TO BOTH CANDIDATES AND UNAUTHORIZED PERSONS EITHER DIRECTLY OR INDIRECTLY.
- 1.2 PLEASE DO **NOT** OPEN THE ENVELOPE CONTAINING THE QUESTION PAPER 24 HOURS BEFORE THE TIME OF COMMENCEMENT OF THE EXAMINATION.

2.0 In addition to the normal fittings of a Physics laboratory each candidate will require the following:

- 2.1
 - 2 Meter rules
 - 1 Needle/optical pin to act as a pointer
 - 1 Retort Stand with a clamp
 - 1 G-Clamp
 - 2 100g masses
 - 1 50g Mass
 - 1 Piece of thread of about 20cm
 - 1 Vernier caliper (This can be shared among the candidates).
- 2.2
 - 4 Drawing pins.
 - 4 Optical pins
 - 1 Glass block
 - 5 White sheets of paper (plain papers)
 - 1 Soft board
 - 1 Protractor.