

**THE UNITED REPUBLIC OF TANZANIA
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA
CERTIFICATE OF SECONDARY EDUCATION EXAMINATION 2024**

031

PHYSICS ACTUAL PRACTICALS

A CHECKLIST OF APPARATUSES

1.0 IMPORTANT

The National Examinations Council has prepared a checklist of apparatuses for Physics Actual Practicals. As a Head of the school **make sure that all the apparatuses** indicated in this checklist are available in the school laboratory. Some of these will be used for the Certificate of Secondary Education Examination (CSEE) 2024. However, the Practical Instructions which will be opened 3 hours before the commencement of the examination will be provided for the laboratory preparations.

2.0 LIST OF APPARATUSES

In addition to the normal fittings of a Physics laboratory, the school must prepare the following apparatuses for each candidate as will be prescribed in the 03 Hours Practical Advance Instructions.

List of Apparatuses

- ✓ (i) Vernier callipers
- ✓ (ii) Resistance box (0 – 200 Ω)
- ✓ (iii) 50 g, 100 g and 200 g standard masses
- * (iv) Objects of mass 70 g, 75g, 80 g, 85 g and 90 g
- ✓ (v) A switch/plug key
- ✓ (vi) A centre-zero galvanometer
- ✓ (vii) Micrometer screw gauge
- ✓ (viii) A rheostat (0 – 200 Ω)
- ✓ (ix) Spiral springs (5 - 10) cm ✓
- ✓ (x) Voltmeter (0 – 2.5 V)
- ✓ (xi) A triple beam balance/electronics balance (0 - 200 g) to be shared
- (xii) Cello tape/masking tape of about 15 cm long ✓
- ✓ (xiii) A pendulum bob
- X (xiv) 4 dry cells (ABC Supper Electric, size D, 1.5 V each)
- ✓ (xv) Cotton thread about 120 cm ✓
- ✓ (xvi) 1 Ω , 2 Ω , 3 Ω , 4 Ω , 5 Ω and 6 Ω standard resistors
- ✓ (xvii) A stopwatch *
- ✓ (xviii) A metre rule

- ✓(xix) A jockey ✓
- ✓(xx) Mixture of water and potassium permanganate (300 ml)
- ✓(xxi) A metre bridge ✓
- ✓(xxii) Water (1000 ml)
- ✓(xxiii) An ammeter (0 – 1 A) ✓
- ✓(xxiv) Constantan wires (SWG 26, 28, 30) of 120 cm long ✓
- ✓(xxv) Plasticine
- ✓(xxvi) 10 pieces of connecting wires ✓
- ✓(xxvii) A measuring cylinder of 20 ml and 100 ml
- ✓(xxviii) Ammeter (0 - 3 A) ✓
- ✓(xxix) Resistance box (1 - 10 Ω) ✓
- ✓(xxx) Knife edge of height about 30 cm
- ✓(xxxi) Crocodile clip ✓

3.0 OTHER REQUIREMENTS

Prepare the following standby labels per candidate:

A, B, E, K, m, Q, R, Rh, R₁, R₂, R₃, R₄, R₅, S, V, w, and x.