Republic Rwanda

Ministry of education

Eastern province

Kirehe District

Exam: PHYSICS PRACTICAL

Maximum: 40 MARKS

Class: SENIOR SIX

Date: 19/03/2024

Duration: 1.5Hours

INSTRUCTION TO CANDIDATES:

-The test is composed of ONE section

-Attempt ALL questions

COMBINATIONS:

PHYSICS-CHEMISTRY-MATHEMATICS (PCM)

MATHEMATICS- PHYSICS- COMPUTER SCIENCE (MPC)

PHYSICS –CHEMISTRY- BIOLOGY (PCB)

MATHEMATICS –PHYSICS- GEOGRAPHY (MPG)

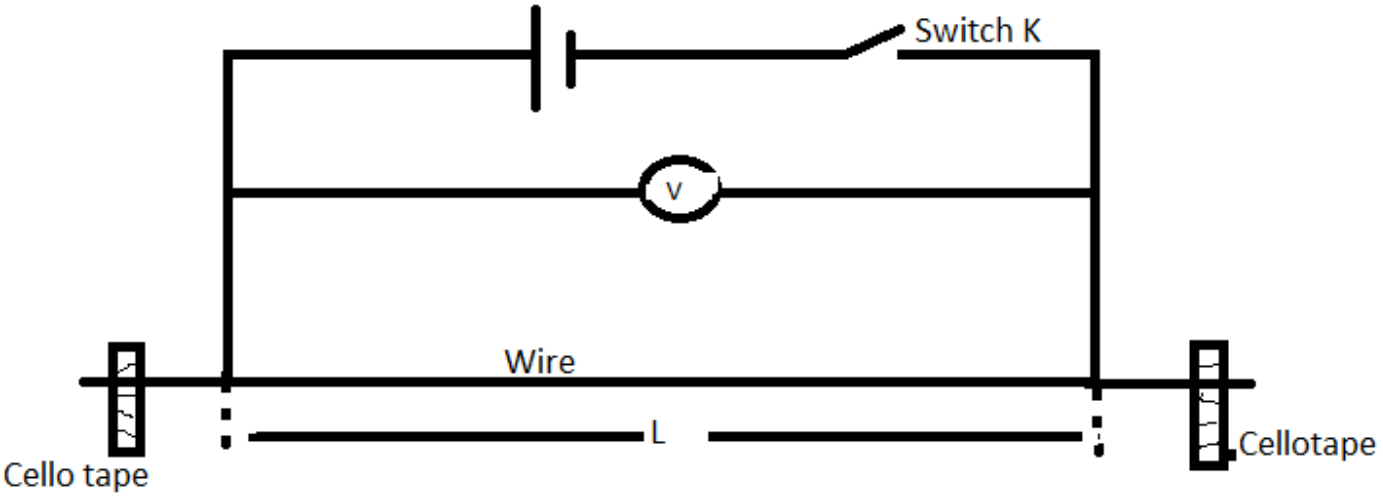
PHYSICS-ECONOMICS-MATHEMATICS (PEM)

SECOND TERM PHYSICS PRACTICAL EXAMINATION /2023-2024

In this experiment you will determine the ratio σ of internal resistance of a dry cell to the resistance per metre of the wire provided.

Needed materials: Two dry cells, one voltmeter (0-3V), connecting wires, switch, meter rule and cell holder

(a) Connect the dry cell ,the switch K and set a voltmeter V across a length L of a the wire as shown below



(b) Starting with L=0.200cm, close switch K. Read and record the value of V on the voltmeter.

(c) Repeat procedure(b) above for values of L=0.300cm;0.40cm;0.500cm;0.600cm;0.700cm and 0.800cm

(d) Tabulate your results including values of $\frac{1}{V}$ and $\frac{1}{L}$ **(12 marks)**

(e) Plot a graph of $\frac{1}{V}$ against $\frac{1}{L}$ **(12 marks)**

(f) Determine the intercept C on the $\frac{1}{V}$ **(5 marks)**

(g) Determine the slope S of your graph **(3 marks)**

(h) Find the value σ from $\frac{100C}{S}$ **(2 marks)**

(i) Why is reading on V decreases as L increases? **(2 marks)**

(j) Suggest any four sources of errors in this experiment **(4 marks)**

BEST WISHES!!!!!!!!!!!!!!!!!!!!!!!!!!!!!