SECOND TERM PHYSICS PRACTICAL S5 EXAM 2024

MARKING SCHEME /40MARKS

THE MARKING SCHEME TO BE USED WILL BE PREPARED BY THE S5 PHYSICS TEACHER

The results will depend on the nature of the spring used and the distance D_0

Follow the following guidelines during the marking of this exam

a)Value of D_0 in mm**(1mark)**

b) Actual value of D=value obtained in a) X 10 in mm **(2marks)**

g) Allocate marks as follows

Mass of the load /g	L/N	D/mm	e=(D_0-D) /mm
20	**(1mark)**	**(1mark)**	**(1mark)**
40	**(1mark)**	**(1mark)**	**(1mark)**
60	**(1mark)**	**(1mark)**	**(1mark)**
80	**(1mark)**	**(1mark)**	**(1mark)**
100	**(1mark)**	**(1mark)**	**(1mark)**
120	**(1mark)**	**(1mark)**	**(1mark)**

Questions

(i) 2Labelled axes with arrows **2x 1mark=2 marks**

2 Uniform scales **2x 1mark=2 marks**

6 plotted points 6x **1mark=6 marks**

Best fit straight line **1 mark**

(ii) Indication of the slope on the graph **1mark**

Formula for the slope **1mark**

Correct value of the slope **1mark**

(iii)Logic interpretation **(3 marks)**

(iv)Any two precautions **(2 marks)**

I(exam setter) obtained the following results

a) D_0=33 mm

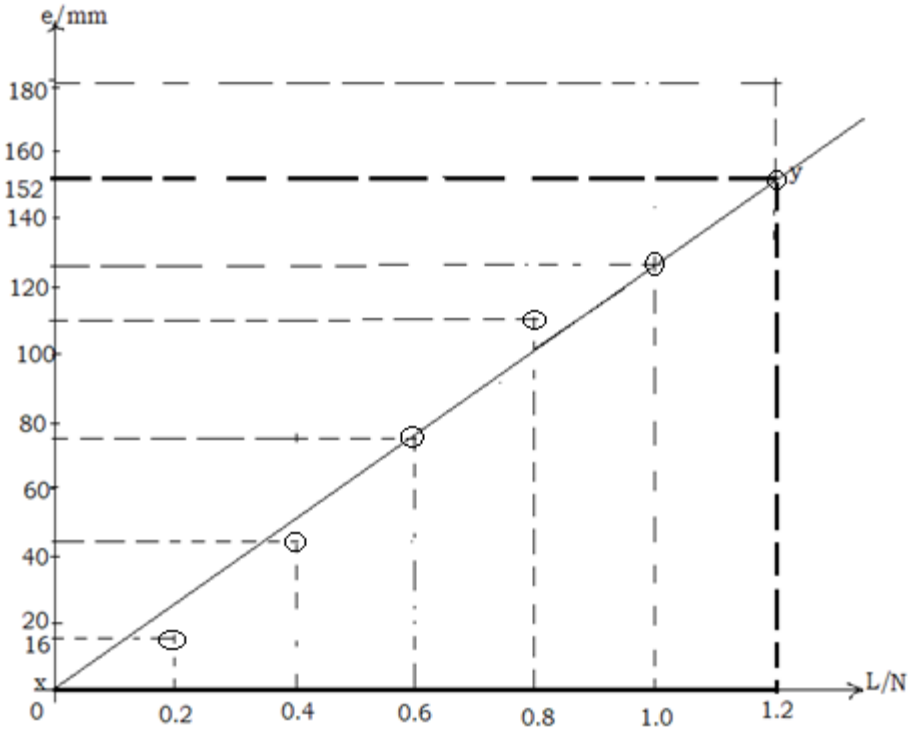
b) Actual value D_0=33mmx10=330 mm

g)

Mass of the load /g	L/N	D/mm	e=(D_0-D) /mm
20	0.2	314	16
40	0.4	287	43
60	0.6	254	76
80	0.8	220	110
100	1.0	184	145
120	1.2	148	182

Questions

(i)



(ii) $G = \frac{152-0}{1.2} = 126.7 mm/N$

(iii)The slope G is the inverse of the spring constant/force constant of the provided spring.

(iv)Avoid parallax error,

Remove the mass when you are recording the

results because the spring may be permanently stretched .

Use of protective clothes (overall or lab coat, gloves),

Use of accurate measuring instruments, adhere to the safety rules etc.