NAME -----------------------------------------CLASS -----------ADM NO -------------

SIGNATURE ------------------------------------DATE ----------------

232/3

FORM 3 PHYSICS PRACTICAL

OCT. 2014

END OF TERM 3

TIME 1 ½ HOURS

1. You are provided with the following apparatus.

i)A convex lens

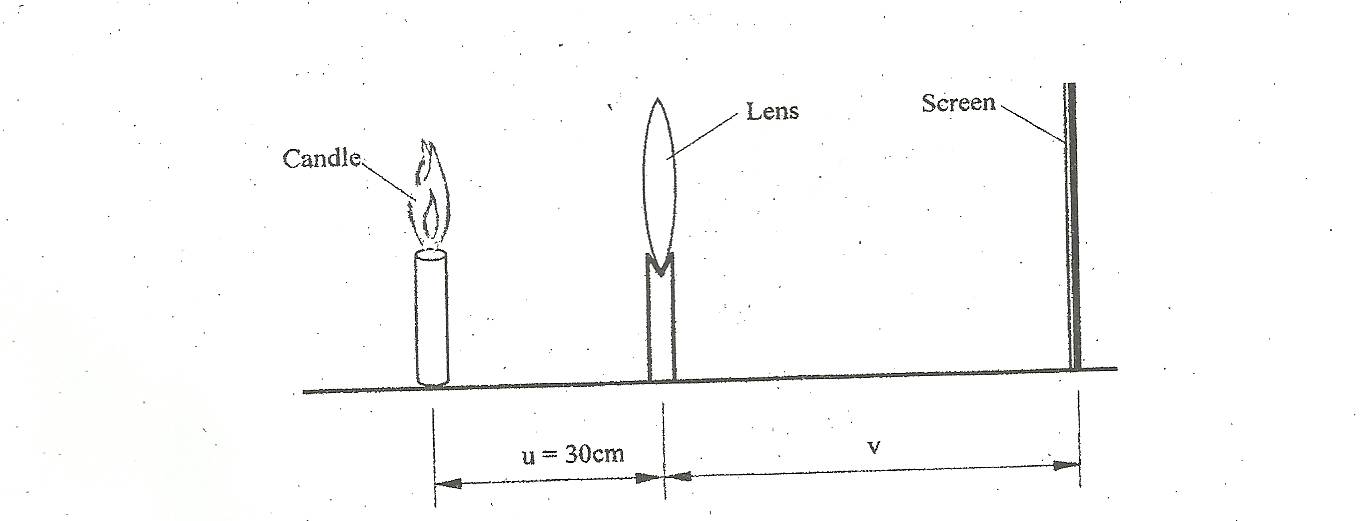
ii)A meter rule

iii) A candle

iv)A lens holder

v)A screen

Set up the apparatus as in the diagrams below.



With object distance u set at 30cm, move the screen to and fro until a clear image is formed on it.

i)Measure and record your image distance

V = --------------------------------------------------------------------------- cm (1mk)

ii)Calculate the value of K from the expression k =

K = -------------------------------------------------------------------------- (1mk)

iii)Now vary the object distance to 100cm and again measure the image distance V and record in the table below.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Object distance u ( cm ) | 100 | 90 | 80 | 70 | 60 | 50 |
| Image distance V (cm) |  |  |  |  |  |  |
| Magnification m = v/u |  |  |  |  |  |  |

b)i)Plot a graph of magnification m ( y – axis) against image distance (V) (5mks)

ii)Calculate the slope of your graph. (2mks)

iii)Determine the reciprocal of the slope. (1mk)

iv)What is the intercept on the x –axis. (1mk)