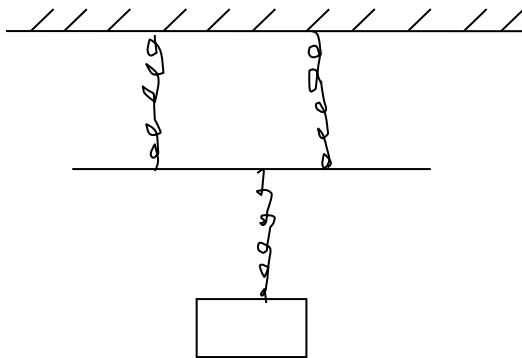


FORM 2 TERM 1 2021
PHYSICS

1. State Hooke's law.

(1mk)

2. Three identical springs are arranged to support a 50N load as shown.



Given that one such spring extends by 2cm when a load of 20N hangs on its lower end, determine total extension of the system.

(3mks)

c) Distinguish between ductile and brittle material.

(2mks)

d) State two factors on which spring constant of a spring depends on.

(2mks)

2. An object of height 1cm is placed 5cm in front of a concave mirror of focal length 3 cm. By scale drawing, determine: position size and nature of image formed.

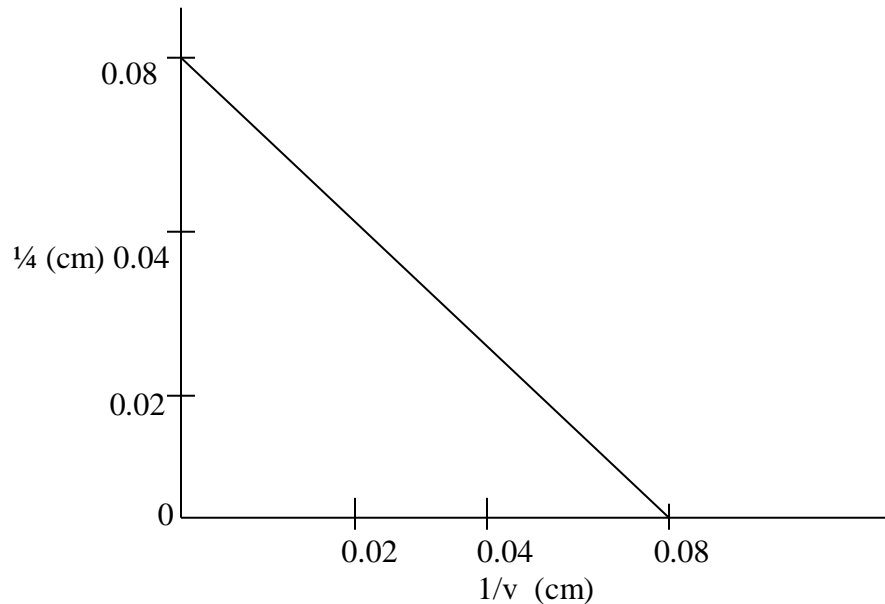
(3mks)

3. i) Define centre of gravity of a body. (2mks)

ii) Use simple sketches to show the three state of equilibrium. Name the states. (3mks)

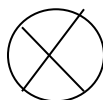
4. i) Distinguish between real and virtual image. (2mks)

ii) The graph shows the variation of $1/u$ and $1/v$ for an object. From the graph, find the focal length of the mirror used. (3mks)



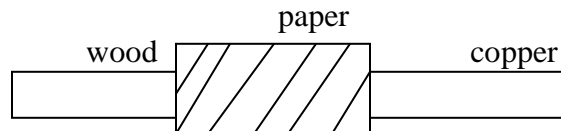
5. State one advantage of an alkaline battery over a lead acid battery. (1mk)

6. Sketch the magnetic pattern around the following conductors. (2mks)



7. When mercury in a glass thermometer is used to measure the temperature of hot water, it is observed that mercury level first drops before beginning to rise. Explain (1mk)

8. A copper rod and a piece of wood of the same size were placed in contact by wrapping them with a piece of paper as shown below;



A source of heat is moved to and fro and from across the paper; state the observations made and explain your observation.

(2mks)

9. State two factors affecting the strength of an electromagnetic.

(2mks)