**OPENER EXAM PHYSICS FORM 3**

**GATITU MIXED SEC SCHOOL**

1. State two ways in which polarization reduces the current produced by a simple cell. 2mks
2. Explain any two special features of clinic thermometer. 2mks
3. Give the difference between cohesion and adhesion. 2mks
4. Explain three factors affecting thermal conductivity. 3mks
5. List two defects of a simple cell 2mks
6. Explain how you can minimize the two defects. 2mks
7. Explain why the lead acid accumulator must not be left discharged for a length of time.1mk
8. State two ways of maintaining an accumulator so that it serves you for a longer period of time.2mks
9. Ventilation is normally placed high on the wall next to the ceiling. Explain why. 2mks
10. Distinguish between a transverse and a longitudinal wave. 2mks
11. A current of 0.08A passes in a circuit for 2.5 minutes. How much charge passes through a point in the circuit? 2mks
12. State three uses of an electroscope. 3mks
13. Give the difference between a real and a virtual image. 2mks
14. State two ways of increasing the size of the image formed by a pinhole camera. 2mks
15. The figure below shows a light bar pivoted at a point and cuted on by various forces such that it remains in equilibrium. Determine the



1. Total clock wise moments. 3mks
2. Total anti clock wise moments 3mks
3. Force f 2mks
4. An object is placed 30 cm from a concave mirror of focal length 20 cm. calculate:
5. The image position 2mks
6. The magnification 2mks
7. In an experiment, a spiral spring was hung vertically from a stand and various weights was noted. The results were recorded as shown in the table.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| LOAD (N) | 0 | 0.2 | 0.4 | 0.6 | 0.8 | 1.0 | 1.2 |  |
| EXTENSION(CM) | 0 | 0.95 | 1.9 | 2.9 | 3.9 | 5.5 | 7.25 |  |

1. Plot the graph of load (y – axis) against the extension of the spring. 5mks
2. From the graph determine the elastic limit of the spring. 1mk
3. From the graph, determine the spring constant within Hooke’s law. 2mks