**GATITU MIXED SECONDARY SCHOOL**

**FORM 3 JUNE MIDTERM EXAM 2014**

**PHYSICS**

1. The hammer below is applied a force of 320N on the handle. Assuming the force applied to the nail is vertical, how large is the force applied to the nail? Take the lengths x=0.8cm and y=10cm (3mks)

320N F Hammer

Nail

y x

2. (i) state the principle of reversibility of light (1mk)

(ii) The figure below shows a ray of light striking a concave mirror from object o;

Concave mirror

C O F

Complete the diagram to show the reflection (4mks)

3. Suggest four basic physical quantities used in measurements 4mks

4. A triangle with 5m base length and a height of 2.5cm is to be used to make a trophy. Calculate it’s in m2 3mks

5. In an experiment to determine the height of a tree by estimation method, a student obtained the following results

Length of the shadow of the tree =2.0m

Length of the shadow of the rod =80cm

Length of the rod =100cm

Use the information above to work out the height of the tree 3mks

6. (a) State the Flemings left hand rule 2mks

(b) Suggest three ways in which an electric motor could be made to move faster  *3mks*

(c) Explain how the motor works 3mks

(d) Mention any other two applications of electromagnetic induction apart from the motor (2mks)

7. Differentiate between inelastic collision and elastic collision 2mks