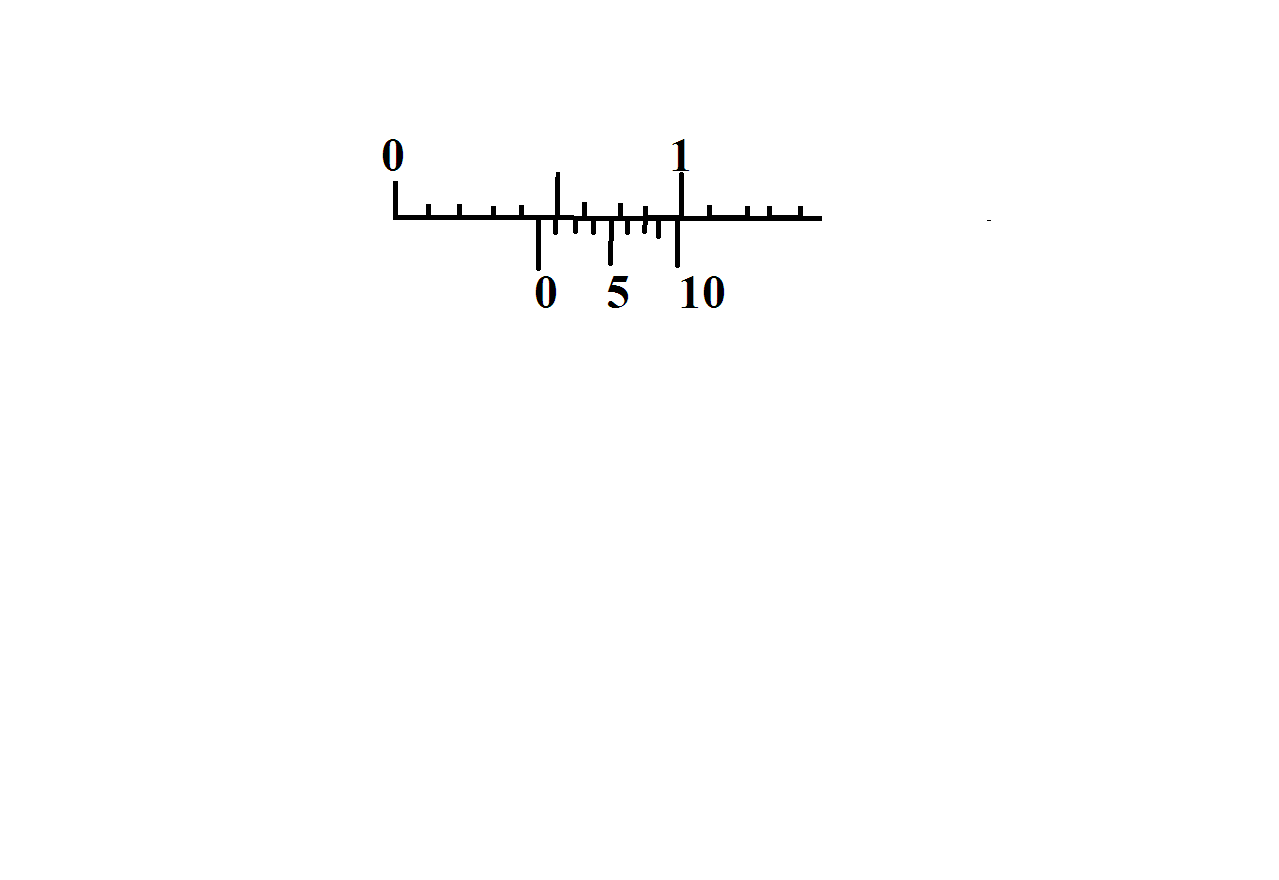
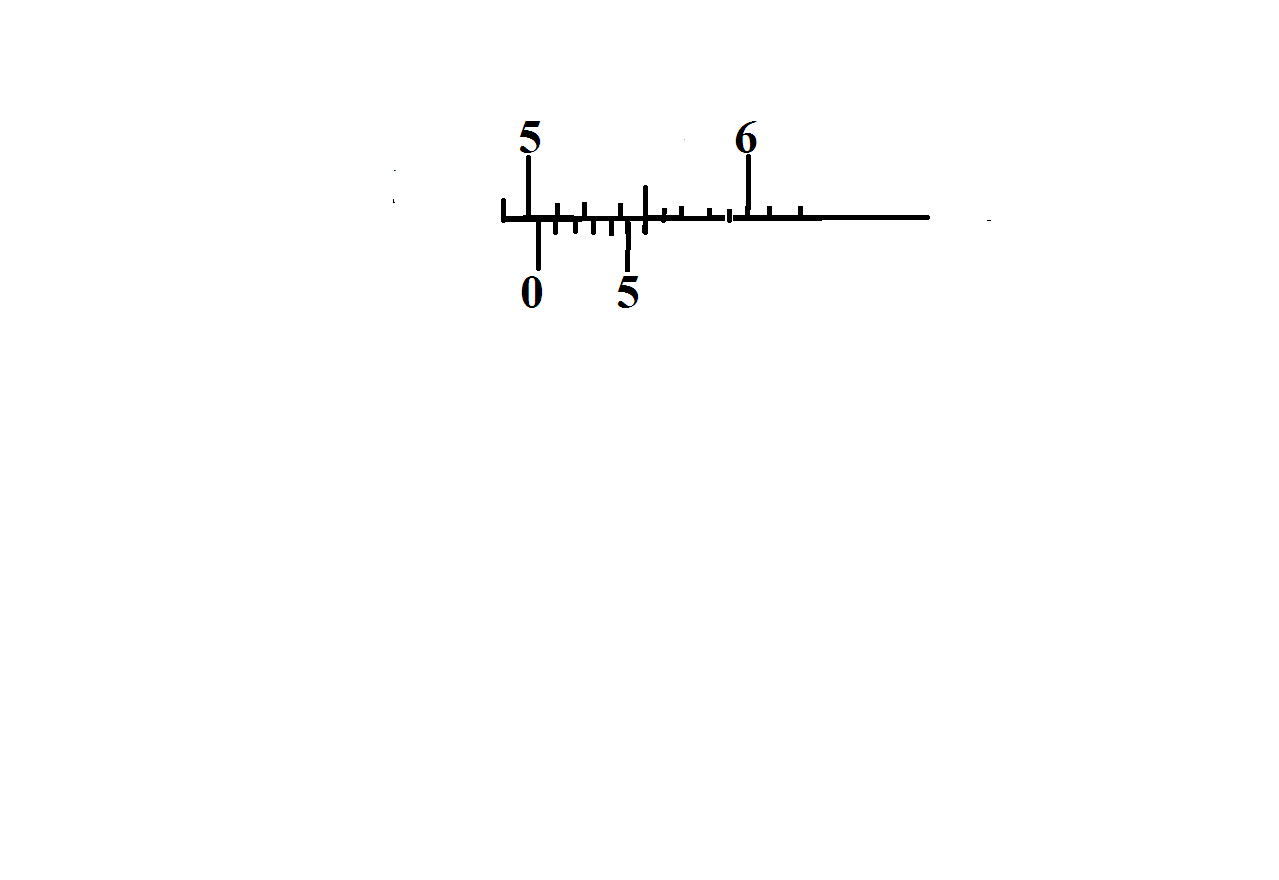
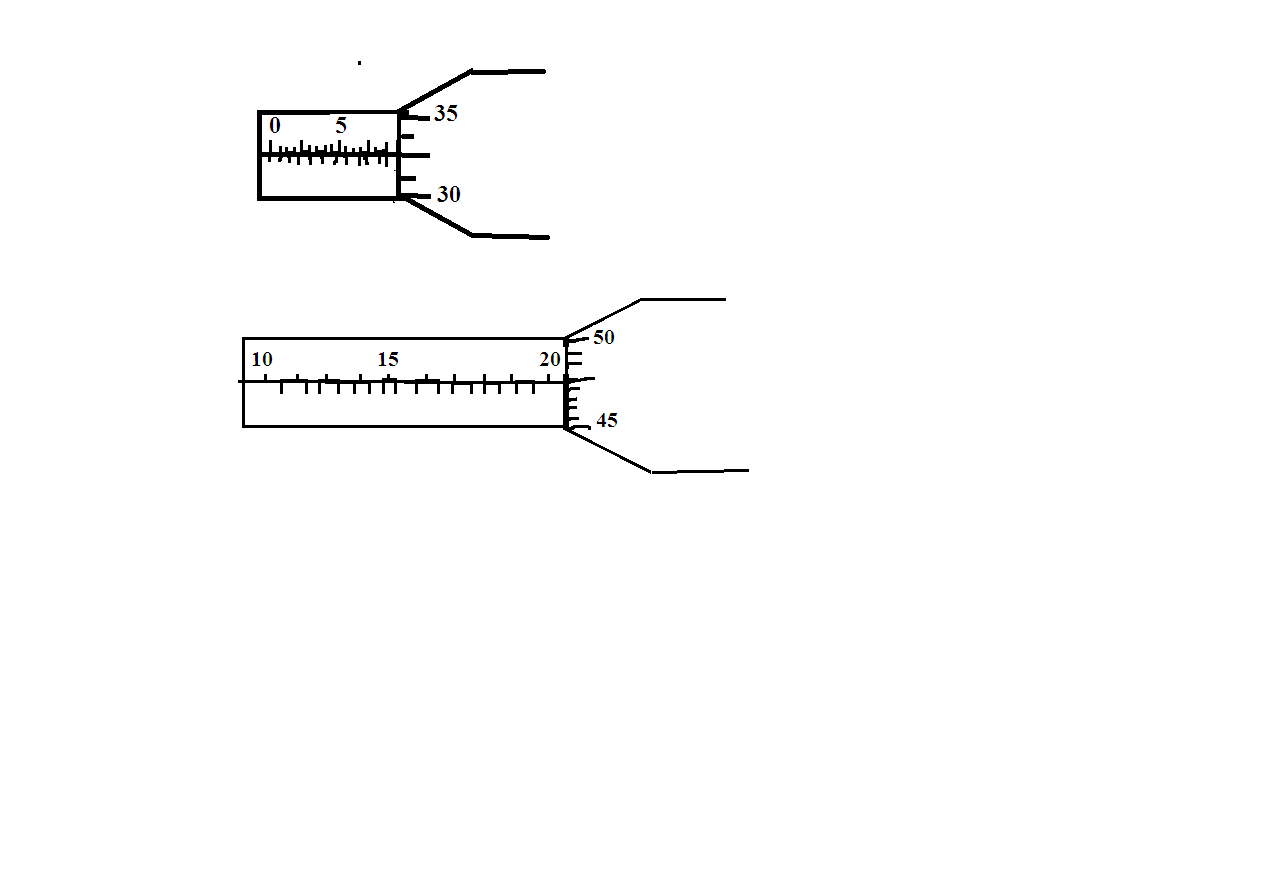
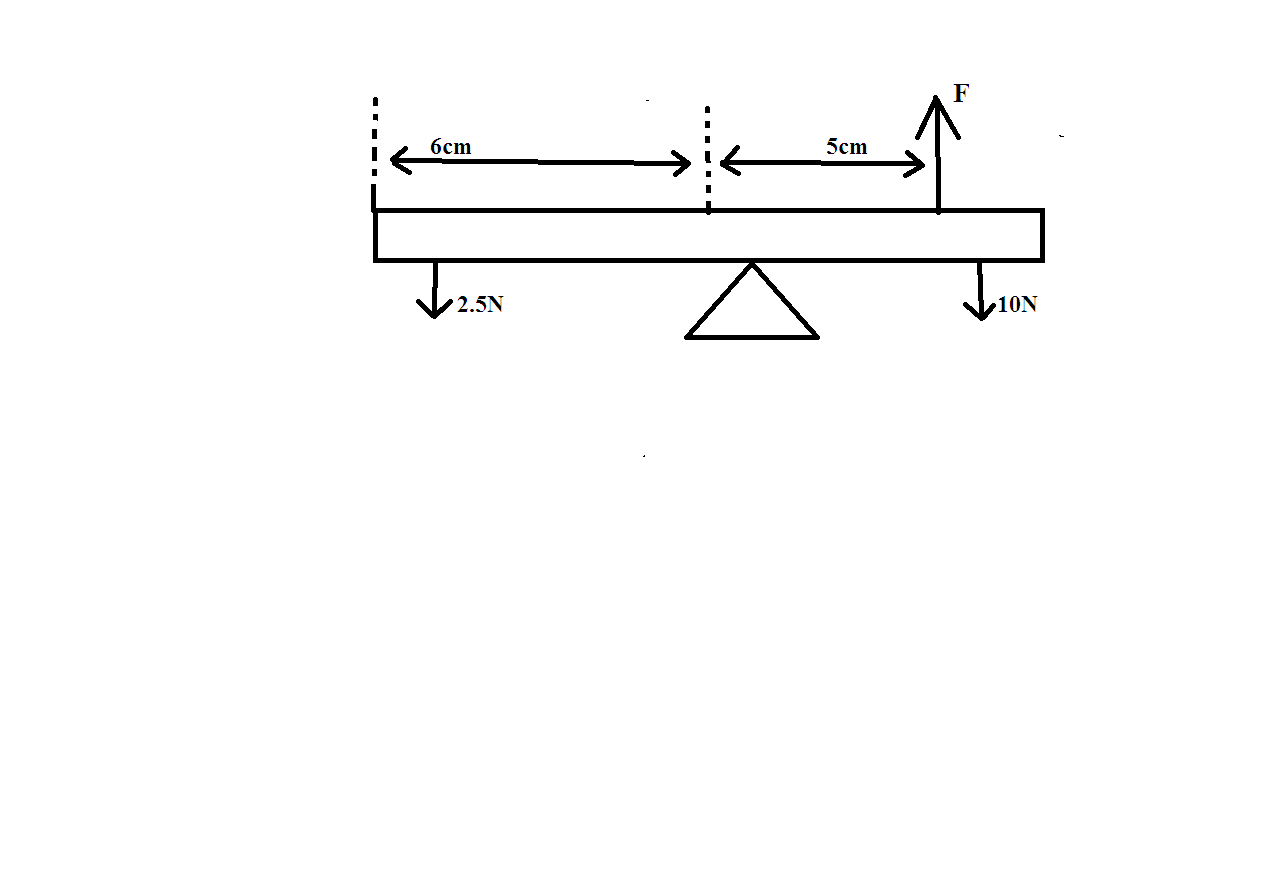
**HEIGHTS SECONDARY SCHOOL –THIKA  
FIRST-TERM 2017 FORM TWO  
MID-TERM EXAMINATION  
PHYSICS  
TIME: 2HOURS**

**ANSWER ALL QUESTIONS**

1. **What is the basic law of magnetism?  
   ………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………(2mks)  
   b)Give two properties of magnetism.  
   ………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………(2mks)**
2. **List down the five means of magnetizing an iron rod.  
   ………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..(5mks)**
3. **Explain the meaning of the following terms   
   i) Magnetic field (2mks)  
     
   ii)Magnetic flux (2mks)  
     
   iii) Magnetic shielding (2mks)**
4. **Write down the vernier caliper readings in the diagrams below.  
   A)  
     
   b) **
5. **Give the readings of the micro meter screw gauge on the diagrams below  
   **

**a) (3mks)  
  
  
  
  
b) (3mks)**

1. **Find the area of a rectangle that measures 4.26cm by2.77 cm and write your correct to  
     
   a) 4 significant figures (2mks)  
     
     
   b) 2 significant figures (2mks)**
2. **Write the following correct to 3 significant figures.  
   a)7321769 (1mk)  
   b) 657.65 (1mk)  
   c)0.001895 (1mk)  
   d)27.0002 (1mk)**
3. **Express the following figures in standard form  
   i)0.00123 (1mk)  
   ii)0.0000001 (1mk)  
   iii)1.5 (1mk)  
   iv)15 (1mk)  
   v)1595 (1mk)**
4. **Express the following numbers in ordinary form.  
   i)6.6 X 10-5 (1mk)  
   ii)7.126 X 103 (1mk)  
   iii)1.257 X 10-2  (1mk)  
   iv)9.99 X 104 (1mk)  
   v)8.1234 X 101 (1mk)**
5. **Express the following in M2 and give your answer in standard form.  
   i)7.5 cm2 (2mks)   
     
     
   ii)0.07 cm2 (2mks)**
6. **A) Define the term moment of force .  
   …………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………….(2mks)  
   b) State the principals of moments.  
   …………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………….(2mks)**
7. **A) Calculate the value of force F in the figure below.  
     
     
   b) Ametre rule is balanced by masses 24g and 16g.suspended from its end find the position of its pivot  
     
     
     
    (2mks)   
   c)List down any four applications of moment of force.  
   …………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………….(2mks)**
8. **A boy of mass 40 kgs sits at a point 2m from the pivot of a seesaw. find the weight of a girl who can balance the seesaw by sitting at a distance of 3.2M from the pivot.  
     
     
     
     
     
    (3mks)**
9. **By use of simple diagrams sketch a micro meter crew gauge scale reading?  
   i) 0.23mm (3mks)  
     
     
   ii) 5.05mm. (3mks)**

**b) By use of simple diagrams sketch a vernier caliper scale reading?  
i) 0.23mm (3mks)  
  
  
ii) 5.05mm. (3mks)**