MAR THOMA RESIDENTIAL SCHOOL THIRUVALLA

SECOND TERMINAL EXAMNATION

Marks: 80

Class: VI | Physics | Time: 2 hrs

I. Fill In The Blanks: (1x8 = 8)

1. The pulley changes the .....of force.
2. Light travels in vacuum at a speed of .....
3. Wheel and axle is combination of big cylinder with small cylinder to produce ..... motion .
4. The rectilinear propagation of light means .....
5. Ball bearings change ..... friction to ..... friction .
6. Gravitational, magnetic and electrostatic forces are ..... forces .
7. Image formed in a pinhole camera is .....
8. The darkest portion of the shadow is called .....

II. Match the following: (1x7=7)

Sliding friction	Amavasiya
Bottle Opener	Lever of class I
Frictional force	Contact force
Writing with a pencil	Poornima
New moon day	Lever of class II
Crowbars	Dynamic friction
Full moon day	Friction

III. Draw different types of beams of light and explain each. (6)

IV. Differentiate the following :(1 point each) (5x1=5)

1. Luminious& Non-luminous bodies
2. Frictional force & Gravitational force
3. Single Fixed pulley & Single Movable Pulley
4. Point source of light & Extended source of light
5. Load arm & Effort arm

V. Give Reason: (3x2=6)

1. The shadows of the object in the morning is bigger than at the noon

2. The vehicles skid when there is ice or water on the road
3. The efficiency of practical machine is less than 100%

VI. Define the following: (6x2=12)

1. Muscular force
2. Fulcrum
3. Mechanical advantage
4. Gravitational force
5. Source of light
6. Velocity ratio

VII. Answer the following:

1. What do you mean by wheel and axle? (2)
2. What are the factors affecting friction ? (2 points) (2)
3. State the effects of force :(4 points) (2)
4. Why is proper care of machines essential?(4 points) (2)
5. What are the benefits of a pulley system? (3)
6. Explain the principle and working of pinhole camera (4)
7. Write the equation of efficiency of an ideal machine? (2)
8. Explain various types of non-contact forces? (3)
9. What is solar eclipse ? (5)
10. Define the three kinds of levers .Draw diagrams to show the position of the fulcrum, load and effort in each of them . (6)

VIII. Solve the following numerical problems.

1. From the following data ,determine the unknown quantity :(Write the equation &substitute the values) (3)
   a. Load= 480 N, Effort=140 N, Mechanical Advantage =?
   b. Mechanical Advantage= 0.3 ,Effort=75 N, Load =?
2. What minimum effort is needed to lift a load of 150 N using a load whose mechanical advantage is 1.5? (2)