**HANNAH HIGH SCHOOL-GAYAZA**

**MID - TERM II EXAMINATIONS**

**S.3PHYSICS**

**Time: 2 hours**

NUMBER 1

1. Define the following terms as applied to machines
2. Load ………………………………………………………………………………………………………………………………………………………………
3. Effort ………………………………………………………………………………………………………………………………………………………………
4. Mechanical advantage ………………………………………………………………………………
5. Velocity ratio ………………………………………………………………………………………………………………………………………………………………
6. Efficiency of a machine ………………………………………………………………………………………………………………………………………………………………
7. A screw of a pitch 2.5 cm is used to raise a load of 200kg when an effort of 50N is applied to the screw of length 20 cm. calculate the
8. Mechanical advantage of the screw ………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………
9. Velocity ratio ………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………
10. Efficiency of the screw ………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

NUMBER 2

1. Define the following terms
2. Displacement ………………………………………………………………………………………………………………………………………………………………
3. Speed ………………………………………………………………………………………………………………………………………………………………
4. Velocity ………………………………………………………………………………………………………………………………………………………………
5. Acceleration ………………………………………………………………………………………………………………………………………………………………
6. The diagram represents a velocity time graph of a body in motion

V (ms-1)

30

10

6 12 18 time(s)

1. Describe the motion of the body ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………
2. Calculate the total distance travelled ……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

SECTION B

NUMBER 3

1. A barber was given a curved mirror of focal length 30 cm so that he could use it as a shaving mirror in his saloon.
2. Identify the type of curved mirror given to the barber
3. Use a ray diagram to illustrate the use of the selected curved mirror as a shaving mirror
4. What are the properties of the image formed above?
5. Describe a simple experiment to show that light travels in a straight line
6. An object of height 4 cm is placed 35 cm away from a pin-hole camera. The screen is 7 cm from the pin hole camera.
7. Draw a ray diagram to show the formation of the image by a pin-hole camera
8. What is the nature of the image formed?
9. Find the height of the image
10. Find the magnification
11. Explain what happens to the image if the pin-hole is made larger
12. Draw a diagram to show the formation of a solar eclipse