NAME: ……..… ADM …….

JUJA GIRLS /MIDWAY HIGH SCHOOLS

END TERM I EXAMINATIONS 2020

FORM ONE

PHYSICS

TIME: 1hr 45 min

Instructions

- *Answer **all** questions in the spaces provided below each question.*

1) Define the following terms: (2mks)

a) Science

b) Physics

2) Identify any ***two*** wonders of nature explained by Physics.(2mks)

3) Explain briefly what Nuclear Physics deals with. (2mks)

4) Give the difference between basic physical quantities and derived physical quantities. (2mks)

5) Define the following: (10 mks)

a) Length

b) Area

c) Volume

d) Mass

e) Density

f) Time

g) Weight

h) Force

i) Elastic material

j) Laboratory

6) State ***two*** factors considered when choosing an instrument for measuring length. (2mks)

7) How are parallax errors minimized when using a metre rule? (1mk)

8) Convert the following into appropriate SI units: (8mks)

a) 30000mm

b) $9000cm^2$

c) $520cm^3$

d) $0.8gcm^{-3}$

9) A thin thread of length 550cm wraps around a cylinder exactly 25 times. Calculate the circumference and radius of the cylinder. ($\pi = {}^{22}/_{7}$) (3mks)

10) Jerome found that the perimeter of his farm was approximately 500 strides. If his stride is 1.1m long, what is the perimeter of the plot? (2mks)

11) A ream of foolscaps contains 500 sheets of papers and has a mass of 2 kg. The size of the ream is 300mm long, 50mm wide and 200mm high. Find:

a) The thickness of one sheet of paper in metres. (2mks)

b) The mass of one sheet of paper. (2mks)

c) The volume of the ream in SI units. (2mks)

d) The volume of one sheet of paper in SI unite. (2mks)

e) The density of the paper used to make the foolscap. (3mks)

12) Water level in a burette is 24cm^3. If 100 drops of water fall from the burette and the average volume of one drop is 0.12cm^3, what is the final water level in the burette? (3mks)

13) The length of a free spring is 8.5cm. When the spring is loaded, it's length becomes 13.2cm. Calculate the extension of the spring. (2mks)

14) The density of glycerine is 1.26gcm^{-3}. What does this mean? (1mk)

15) Some plasticine is moulded to form a sphere of radius 3.5cm.

a) Calculate the volume of the sphere. (2mks)

b) If the same plasticine is remoulded into s cylinder, determine the volume of the cylinder. (1mk)

c) Given that the height of the cylinder in (b) above is 7.0cm, calculate its diameter. (2mks)

16) A mixture consists of 40cm^3 of water 60cm^3 of liquid X. If the densities of water and liquid X are 1.0gcm^{-3} and 0.8gcm^{-3} respectively, calculate the density of the mixture. (3mks)

17) State ***two*** effects of force on a body. (2mks)

18) Why is force said to be a vector quantity? (1mk)

19) Give the difference between adhesive and cohesive forces. (2mks)

20) Water rises up a narrow tube while mercury is depressed inside the same tube. Explain. (2mks)

21) The weight of a certain solid in air is 550N, when the same solid is fully submerged in brine it weighs 400N. Calculate the upthrust due to brine on the solid. (2mks)

22) State ***two*** factors that affect the surface tension of a liquid surface. (2mks)

END