**NAME.................................................................ADM NO.............CLASS.........**

**PHYSICS FORM 1**

1. Name three career opportunities involving physics that are offered in the local universities. (3mks)

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2. State four laboratory rules. (4mks)

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3. State six branches of physics and what each branch deals with. (12mks) ............................................................................................................................................................................................................................................................................................................................................................................................. ............................................................................................................................................................................................................................................................................................................................................................................................. .............................................................................................................................................................................................................................................................

4. Fill in the blank spaces in the table shown below.

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|  | **Basic Physical****quantity** | **SI** | **Symbol of Unit** |
| 1 |  | Meter | M |
| 2 |  | Kilogram |  |
| 3 |  | Ampere | A |
| 4 | Light intensity |  | Cd |
| 5 | Time |  | S |
| 6 | Amount of substance |  |  |
| 7 |  | Newton |  |

5. i. Define the term density. (1mk)

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ii. The density of a material is 62.5gcm-3. Express this in SI units Kgm-3. (3mks)

6. Convert each of the following volumes to m3. (5mks)

a. 1,500,000,000 cm3

b. 20.0 l

c. 1.0 ml

d. 10,000 mm3

e. 600 dm3

7. The mass of a density bottle is 20g when empty and 45g when full of water. When full of mercury, its mass is 360g. Calculate the density of mercury. (5mks)

8. Name three derived physical quantities and state their SI unit. (3mks)

9. Name three instruments that are used to measure volume of liquids in the school laboratory. (3mks)

10. a. Define the term mass and give its SI unit. (2mks)

b. Convert each of the following as indicated. (4mks)

i. 10 tonnes in kg.

ii. 200,000 mg in Kg

iii. 25,600 g in tones

iv. 0.000342 tonne in mg.

11. State 4 differences between mass and weight. (4mks)

Mass Weight

12. State three effects of force on a moving object. (3mks)

13. Giving examples to distinguish between cohesive and adhesive forces. (4mks)

14. a. Mass of a boy is same everywhere but weight varies. Explain. (2mks)

b. The mass of a boy is 40kg. What is the weight of the boy on the surface of moon? (Take g on moon’s surface as 1.67NKg-1) (3mks)

15. The diagram below shows instruments used in laboratory.

i. Name the instrument. (1mk)

ii. What is the length of object shown above? (2mks)

16. A stone is thrown vertically upward. State two forces acting on it. (2mks)

17. The thickness of a rim of paper is 5cm. What is the thickness of each paper in mm. (1 rim – 500 papers.) (2mks)

18. A block of glass of mass 187.5g is 5.0cm long, 2.0 cm thick and 7.5cm high. Calculate the density of the glass block in Kg/cm3. (3mks)