**PHYSICS FORM ONE**

**C.A.T 1 TERM 1 -2021**

**MARKING SCHEME**

1. Define physics. (1mk)

***It is a study of matter and its relation to energy.***

1. Explain the relationship between physics and mathematics. (1mk)

***Many concepts in physics are expressed mathematically.***

1. State three basic rules in a laboratory relating to electricity. (3mks)
* ***A location of electricity switches, firefighting equipment and first Aid kits must be noted.***
* ***Ensure that all electrical switches are turned off.***
* ***Never plug in foreign objects into electrical sockets since one can damage the socket or risk an electrocution.***
* ***Never touch any electrical socket or naked wires with wet hands.***
1. Briefly explain the first aid for the following;-
2. Acid or base burns. (1mks)

***Sodium hydrogen carbonate, should be applied on acid burns and boric acid or vinegar on base burns.***

1. Poison in the eye. (1mks)

***Flush the eye with the clean water for at least 15 minutes and patient advised not to rub the eyes.***

1. Fill the following table. (4mks)

|  |  |  |
| --- | --- | --- |
| **Basic physical quantity**  | **SI unit**  | **Symbol of units** |
| Length  | ***Metre*** | ***m*** |
| ***Time***  | Second.  | ***s*** |
| ***Electric current*** | ***Ampere***  | A  |
| ***Thermodynamic***  | Kelvin. | ***k*** |

1. Define the following terms and state their SI units.
2. Area - (2mks)

***This is the measure of extend of surface SI unit cm2, m2***

1. Mass - (2mks)

***It is the measure of quantity of matter contained in a substance SI kg, g***

1. Density - (2mks)

***This is the mass per unit volume of a substance SI kg/m3.***

1. Differentiate between a basic quantity and a derived quantity. (2mks)

***Basic quantities are quantities that cannot be obtained from any other physical quantities while derived quantities are quantities obtained by multiplication or division of basic quantities.***

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

***Circumference*** $ =\frac{550}{25} =22cm$ *√1*

***Circum =*** $πD or 2πr$

$$2πr=22 $$

$2×^{22}/\_{7}×r=22$ *√1*

$$r=22×^{7}/\_{22}×^{1}/\_{2}$$

*R = 3.5cm √1*

(b) If a ream of 500 papers weighs 2.5kg find the mass of single sheet in;

1. Kg. (2mks)

$\frac{2.5 kg}{500}$ *1*

$=0.005 kg $ *√1*

1. g (2mks)

***1000g – 1kg***

***0.005kg***

$1000^{√1}×0.005=5g$ ***√1***

1. teaching.engineering,pharmacy
2. i. place the metre rule in contact with the book

 ii. place the end of the book against the zero mark on scale

1. Position the eye perpendicularly above the scale and obtain the value