SUCCESS KEY TEST SERIES

IX (English)

(Unit Test-1 Science -1 (Ch-1,2,3))

Science And Technology 1-(1,2,3)

DATE: 28-09-19

TIME: 1.5 hrs

MARKS: 30

SEAT NO:

Q.1 Solve the following questions. **(5)**

1) Find the odd one out

Charge **:** The coulomb **: :** Current **:** ..... .

2) Rubber, copper, wood, glass

3) “The revolution of the moon around the earth”. Here, the work done by the gravitational force exerted by the earth is zero because the displacement of the moon is at ..... to the direction of the earth’s gravitational force.

4) State True or False

Fuse wire is connected in series to the electric appliances

5) ..... erg = 1 joule.

B) Choose the correct alternative. **(5)**

1) Three friends A, B and C start journey to reach same destination. A used his car, B uses his cycle and C goes walking who according to you is doing more work.

a. A and B b. B and C
c. only A d. All are doing same work

2) The potential energy of your body is least when you are .....

a. sitting on a chair. b. sitting on the ground.
c. sleeping on the ground. d. standing on the ground.

3) A car is moving with a velocity of 50km/hr for 5 hours, is an example of .....

a. zero acceleration b. positive acceleration
c. negative acceleration d. retardation

4) If the velocity changes by equal amounts in equal time intervals, the object is said to have ..... .

a. uniform velocity b. non-uniform velocity
c. non-uniform motion d. uniform acceleration.

5) $v^2 = u^2 + 2as$ is the relation between .....

a. speed and velocity b. displacement and velocity
c. displacement and time d. velocity and time

Q.2 Solve the following questions. (Any Three) **(6)**

1) Define one ohm?

2) Wind rotates the blades of a windmill.

3) Distinguish between

OHMIC Conductor and Non-OHMIC Conductor

4) Metal wire carrying current is always insulated.

Q.3 Solve the following questions. (Any three) **(9)**

1) The resistance of a 1m long nichrome wire is 6 Ω If we reduce the length of the wire to 70 cm. What will be the resistance.

2) A body goes around the sun with constant speed in a circular orbit. Is the motion uniform or accelerated?

3) Draw the electric circuit when resistors are connected in series.

4) Draw the diagram to show resistor connected in parallel.

Q.4 Solve the following questions. (Any one) **(5)**

1) Define and explain the term 'Specific resistance' (Resistivity).

i. Experimentally, it is found that, at constant temperature, the resistance(R) of a metallic conductor
   a. is directly proportional to its length (*l*),
   b. is inversely proportional to the area of cross section (A),
   c. depends upon the material of the conductor.

ii. ∴ R α [ ]

∴ $R = \rho \frac{l}{A}$ where, **ρ (Rho)** is a [ ], called the Specific resistance or Resistivity of the material of the conductor.

∴ ρ = R [ ]

iii. If l = [ ] and A = [ ], then **ρ =** [ ]

iv. **"Specific resistance** or **Resistivity** of a material of a conductor is the resistance(**R**) of the a conductor of unit length and unit area of cross section**".**

v. ∵ ρ = R [ ]

∴ **Unit of ρ** = [ ]

$= \frac{\text{ohm(meter)}^2}{\text{meter}}$

= [ ]

vi. ∴ **the S.I. unit of Specific resistance is** [ ]

2) Take 5 examples from your surroundings and give explanation based on Newtons laws of motion.