BOKARO STEEL CITY

ASSIGNMENT FOR THE SESSION 2014-2015

Class: IX **Subject : Science & Tech.** **Assignment No. 5**

Section – A : Physics

1) To accelerate an object to a rate of $2m/s^2$, 10 N force is required. Find the mass of object.

2) If 1000 N force is required to accelerate an object to the rate of $5m/s^2$, what will be the weight of the object?

3) Differentiate between mass and weight?

4) A scooter is moving with a velocity of 20m/s when brakes are applied. The mass of the scooter and the rider is 180Kg. The constant force applied by the brakes is 500N.

   a) How long should the brakes be applied to make the scooter come to a halt?

   b) How far does the scooter travel before it comes to rest?

5) State Newton's third law of motion and how does it explain the walking of man on the ground?

6) When a carpet is beaten with a stick, dust comes out of it. Explain

7) Why is it advised to tie any luggage kept on the roof of a bus with a rope?

Section – B : Chemistry

1. a) Convert the following temperatures to Celsius scale
   i) 293 K ii) 470 K

   b) Convert the following temperatures to Kelvin scale.
   i) 25^0 C ii) 137^0 C

2. Define sublimation. Give three examples of substances which undergo sublimation.

3. Differentiate between compounds and mixtures.

4. Write four characteristics of each of the following:
   a) True solution b) Colloids c) Suspension

5. A solution contains 5 ml of alcohol mixed with 75 ml of water. Calculate the concentration of the solution in terms of volume percent.

Section – C : Biology

1. Name one site of occurrence of the following tissues in a living plant body?

   a. Cambium b. Xylem c. Chlorenchyma

2. Mention the distinguishing feature of parenchyma, collenchyma and sclerenchyma tissue/cell.

3. Sieve tube cells of phloem tissue do not possess nuclei in mature state, still they remain alive. Give reason.

4. Write down any three differences between smooth, striated and cardiac muscles.

5. Enumerate the factors affecting stored grains and describe their preventive measures.

6. On visiting a nearby Cattle yard, a student found three different cross breeds of cows. They are Karan Fries, Frieswal & Karan Swiss. Can you name the breed whose cross breeds are there?

7. Explain composite fish culture system with example.

8. What is mixed cropping? Mention the criteria to be adopted in selecting the component crops for mixed cropping. Mention any two advantages of mixed cropping.

****