BRAIN INTERNATIONAL SCHOOL

Science Assignment **Class: IX** **July'18**

Chapter-9 :Force and Laws of Motion

Q1.Raja tries to push a box on a rough floor but is unable to move it.Name the force which balances the force applied by him?

Q2. What would happen if a fielder stops the fast moving ball suddenly? Justify your answer

Q3. When action and reaction forces are equal and opposite, why don't they cancel each other?

Q4. What do you mean by Balanced forces? Illustrate by giving one example

Q5. Two objects A and B of same masses and velocities v and 3v respectively are in motion.

(a)Which object has larger momentum?

(b)Give reasons to support your answer.

Q6. A person is prone to more serious injuries when falling from a certain height on a hard concrete floor than on a sandy surface. Explain why?

Q7. Mathematically show that during collision of two balls total momentum of the system remains unchanged. Hence, state the law of conservation of momentum..

Q8. State Newton;s second law of motion. Obtain the relation F = ma.

Q9. Apply Newton's third law of motion of the following problems:

(a)rowing of a boat in a river (b)flight of a bird

Q10. A force of 5N produces an acceleration of 8 m/s^2 in mass m_1 and acceleration of 24 m/s^2 in mass m_2.What acceleration would it give if both the masses are tied together?

Chapter -2:Is Matter Around Us Pure ?

1.Write differences between the sol, solution and suspension .

2.Explain Tyndall effect in nature .

3.Write the properties of solution .

4.How can you obtain dye from ink ?

5.Explain the separation of cream from milk by centrifugation .

6.Define the terms : (a) Saturated solution (b) Unsaturated solution (a) Supersaturated solution .

7.Name any three metalloids.

8.Differentiate between distillation and sublimation .

9.A saturated solution of potassium nitrate at 283K contains 10.5g salt in 50g of water. Calculate

the solubility of the salt at this temperature .

10. 100g of saturated solution of NaCl at 293K on evaporation yielded 26.2 g of dry salt. What

is the solubility of sodium chloride at 293K ?