Board –ICSE	Class – 10th	Topic – Force

1. Mass of a body is tripled and its velocity is halved. What will happen to its momentum?
2. Two objects have equal momentum but masses in the ratio 3:2. Calculate the ratio of their velocities.
3. Mass of a body is 50g and it is subjected to a force of 0.01 N. Calculate the acceleration of the body in SI units and CGS units.
4. Velocity of a car of mass 2 tonnes is increased from 36 km/hr to 144km/hr in 10 seconds. Calculate the force applied by its engine. [1 tonne = 1000kg]
5. A force of 100N is applied on a body of mass 2kg at rest for 3 seconds. What will be velocity of the body after 10 seconds of application of the force assuming no friction?
6. A force of 10gf is applied on a body of mass 98g. Calculate the acceleration of the body [g = 9.8 m/s^2 = 980 cm/s^2]
7. A retarding force of 20N is applied on a body of mass 2kg moving at 150m/s for 10 seconds. Calculate the velocity and the displacement of the body at the end of 10 seconds. What will the displacement of the body 5 seconds after the force is removed.
8. Calculate the position of the fulcrum at which a meter rule of mass 20gf can be balanced when three weights 50gf, 10gf & 200gf are applied at 20cm, 40cm & 90cm marks respectively.
9. Calculate the i) clockwise moment ii) anticlockwise moments & iii) net moment on a rod of length 5m & mass 3000g pivoted at 3m from an end, if 2 weights of 500gf & 800gf are placed at 2m & 4.5m from the same end. [3]
10. A meter rule can be balanced about 60 cm mark by placing a block of weight ‘m’ at 90cm mark. State whether the ruler is lighter than or heavier than the block of weight ‘m’? If the mass of the ruler is 80g & another block of weight ‘m’ is placed at 100cm mark, then calculate the weight that should be placed at 40cm position to balance the ruler.
11. Name the force which is a must for sustaining circular motion.
12. What is the basic difference between uniform linear motion & uniform circular motion?

13. Where is the C.G. of a
    (i) Ring
    (ii) Rhombus
    (iii) Scalene Triangle
    (iv) Cylinder
14. How do you determine C.G. of an irregular object?