**Gulistan Academy**

Physics (9th) Max.Marks = 40

Chapter No.4 (Turning Effect of Forces) Pass Marks = 20

Time Allowed = 1 Hour

**Question No.1: Give short answers. (12x2 = 24)**

1. *Define Like and Unlike parallel forces.*
2. *What do you mean by the resultant of forces?*
3. *What is a rigid body?*
4. *What is the principle of moments?*
5. *When a body is said to be in equilibrium?*
6. *Give an example of a body which is at rest but not in equilibrium.*
7. *Why a body can’t be in equilibrium if only a single force acts on it?*
8. *Why the heights of vehicles kept as small as possible?*
9. *Give an example of a moving body which is in equilibrium.*
10. *A force of* ***50 N*** *is making an angle of* ***30o*** *with the* ***x-axis****. Find its perpendicular components.*
11. *A mechanic tights a nut with a spanner of length* ***15 cm*** *by applying a force of* ***200 N****. Find the torque needed to tight the nut.*
12. *What do you mean by Centre of mass and Centre of gravity?*

**Question No.2: (5+3 = 8)**

1. *What is the resolution of forces? How to factorize a force into its rectangular components?*
2. *A picture frame is hanging with two vertical strings. The tensions in the strings are* ***3.8 N*** *and* ***4.4 N*** *respectively. Find the weight of the picture frame.*

**Question No.3: (5+3 = 8)**

1. *Explain the different states of equilibrium with examples.*
2. *A nut is tighten with a force of* ***200 N*** *by using a spanner of length* ***10 cm.*** *What will be the length of spanner required to loose it by applying a force of* ***150 N****?*