**Gulistan Academy**

Physics (10th) Max.Marks = 40

Chapter No.12 (Geometrical Optics) Pass Marks = 20

**Time = 1 Hour** Teacher Name: M.Maaz

**Question No.1: Give short answers. (2x12 = 24)**

1. *What do you mean by the reflection of light? Shortly explain with diagram.*
2. *Define the following terms used in refraction:*
3. *Angle of incident* ***(b)*** *Angle of refraction*
4. *What is meant by the term total internal reflection?*
5. *What is critical angle? Write the formula that relates the critical angle and the refractive index of a substance.*
6. *What is meant by the principal focus of a* ***(a)*** *convex lens and* ***(b)*** *concave lens?*
7. *Differentiate between Real and Virtual image.*
8. *How does a converging lens act like a simple microscope?*
9. *Define the terms Resolving Power and Magnifying Power.*
10. *Draw the ray diagram of refracting telescope.*
11. *Explain why light waves are refracted at a boundary between two materials.*
12. *Why or why not concave mirrors are suitable for make-up?*
13. *How does the thickness of lens effect its focal length?*

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

1. *What is Compound Microscope? Derive the formula for its Magnification. Also lists some of its uses.*
2. *Find the focal length of a mirror that forms an image* ***5.66 cm*** *behind a mirror of an object placed at* ***34.4 cm*** *in front of the mirror.*

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

1. *What is meant by the terms nearsightedness and farsightedness? How can these defects can be corrected?*
2. *The power of a convex lens is* ***5 D****. At what distance the object should be placed from the lens so that its real and 2 times larger image is formed.*

***Best of luck***