Second Year B.Sc Optometry Degree Supplementary Examinations – June 2015

Visual Optics

Time : 3 hrs   **Max marks : 80**

- **Answer all questions**
- **Draw diagram wherever necessary**

Essays   **(2x15=30)**

1. Define accommodation and discuss the mechanism of accommodation. How the near point of accommodation is measured.

2. Define myopia. Discuss the etiology, clinical types and treatment of myopia.

Short notes   **(5x5=25)**

3. Sturm's conoid

4. Principle and procedure of baush and lomb keratometry

5. Discuss the various components of hypermetropia

6. Total internal reflection of light and critical angle

7. Role of cornea and lens in ocular refraction

Answer briefly   **(10x2 = 20)**

8. Photochromic lenses

9. Base curve of spectacle lens

10. Astigmatic fan

11. How cross cylinder is used to refine the axis of a cylindrical lens.

12. Spherical aberration

13. Prentice rule

14. Hypermetropia and normal age variation

15. Principle of retinoscopy

16. Cycloplegic refraction

17. Do the toric transposition of +4.0 DS – 1.5 D. Cyl 90 degrees (Base curve -6.0)

One word answer   **(5x1 = 5)**

18. Vertex distance should be specified for prescription of more than ---------- dioptres

19. The effective power of a convex lens ------------------ as it is moved away from the eye

20. --------------------- is the centre of optical system formed by the lens and all rays passing through it are undeviated

21. Anti reflective coatings on spectacle lenses are based on the principle of ----------------

22. Far point of an emmetropic eye is at ------------------

****