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

Optometric Optics

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

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

Essays   **(2x15=30)**

1. Explain the various designs of progressive addition lens. Describe the patient selection and dispensing of progressive addition lens.

2. Mention the lens quality with respect to faults in the material and on the surface of a lens. Explain the different techniques of inspecting a lens for its defects.

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

3. Mention about the following aberration : ● Oblique astigmatism ● Distortion

4. Derive the formula to find the front and back vertex powers of a lens.

5. Electromagnetic spectrum.

6. Find the prismatic effects introduced by decentering the lens -2.00DS/+3.00 DC*180, 6mm up and in along 30 degree.Also find the resultant prismatic effects.

7. Iseikonic lenses and spectacle magnifiers.

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

8. Calculate the spectacle tool required to produce a +10.00DS surface on glass of refractive index 1.625.

9. Polarizing filters

10. Ghost images

11. Difference between thermoplastic and thermo elastic materials

12. Fitting philosophies for kryptok bifocal

13. Rotary prisms

14. Decentration

15. Transpose the prescription in to its alternative forms :   -0.75DC*105 / -4.0DC*15

16. Skull and riding bow temple

17. Principle ingredients of ophthalmic glass

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

18. Q Prism BD and BO @20 in old English notation = ...in 360 degree notation

19. Polycarbonate materials absorb-------------- radiations

20. -------------------- is the refractive index of allyl diglycol carbonate

21. Plastics as raw materials can be obtained naturally from ------------------in the animal kingdom.

22. PMMA when heated above ------------------- demoulds and becomes a flat sheet.

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