QPCode: 201013 RegNo:……

Second Year B.Sc Optometry Degree Examinations - October 2012

Optometric Optics

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

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

Essays **(2x15=30)**

1. Explain in detail on the manufacture of glass by individual batch method and continuous flow process.
2. Describe in detail about the plastic and metal materials used for spectacle frames.

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

3. Explain briefly on different types of spectacle bridge areas and temples.
4. Explain the principles of a single-layer anti reflection coating.
5. A thin lens is to have a power of +1.25D in the vertical meridian and +2.50D in the horizontal meridian. Write out its prescription in toric form with a +6.00D base.
6. Describe the steps in finding the sphero-cylindrical equivalent of an obliquely crossed cylinder.
7. Derive the equation to find the thickness difference of a prism with the help of a neat figure.

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

8. Oblique astigmatism
9. Ocular effects of UV radiation
10. CR-39
11. Clinical uses of risley prism
12. Neutral grey filters
13. Transpose the prescription into its alternate forms: -1.25DC*95 / -5.50DC*5
14. Mention one use each of lens calipers and lens measure.
15. A lens measure calibrated for spectacle glass reads +4.00D when placed on a surface of refractive index 1.523. Find the true power of the surface.
16. Thermoplastic materials
17. Soft design of progressive addition lens

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

18. ---------- -----system measures the PD using a_ corneal reflex
19. ---------- is the focal length of the lens power -2.00D
20. When recumbent prisms are provided to subjects with a pair of spectacles, they rotate their fields through ----------
21. .When the lower, nasal portion of a lens shape is removed to allow for a better fit, it is called a ----------
22. ---------- should be the normal pantoscopic tilt required for single vision prescriptions

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