Q.P. Code 201013 **Reg. No.:……**

Second Year B.Sc Optometry Degree Supplementary Examinations
October 2017
Optometric Optics

(2010 scheme)

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

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

Essays **(2x15=30)**

1. What is inter-pupillary distance. Brief on the steps involved in manual measuring of binocular pupillary distance. Mention the common errors encountered during inter-pupillary distance measurement. List down two uses each of measuring distance and near pupillary distances before ordering the lens.
2. Describe the parts of a spectacle frame. With the help of a neat diagram explain the boxing system. List down the plastic and metal materials used in the spectacle frames.

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

3. Compound 1 prism diopter base down & 5 prism diopter base out into a single resultant prismatic effect for the right eye using graphical method.
4. A lens system made up of 2 thin co-axial lenses whose powers are +15.00DS & -15.00DS are separated by 5cm. Find the front and back vertex power of the system.
5. Chemically toughened lenses.
6. Aspheric lenses.
7. Crown glass and polymethyl methacrylate.

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

8. Mention the advantages of polycarbonate lenses.
9. Define ANSI Z87 safety eye ware standard.
10. Brief on the bevel edging during the process of lens mounting.
11. What is executive bifocal. List its advantages and disadvantages to an end user.
12. Describe “vein” in a finished lens.
13. What is negative lenticular lens.
14. What is jump effect.
15. What is chromatic aberration. How is abbe value useful in determining the chromatic aberration in a lens.
16. What is isekonic lens. Give an example.
17. What is best form lens. Give an example.

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

18. Find the prismatic effect at point 6mm below the optic center of +4.00DS lens.
19. Transpose into its alternate form
    +3.00DS/-1.75DC*180
20. What is the standard pantoscopic tilt for progressive addition lenses.
21. What is a periscopic lens.
22. Define effective power.

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