

**Second Year B.Sc Optometry Degree Supplementary Examinations –**

**November 2016**

**Optometric Optics**

**(2010 scheme)**

**Time : 3 hrs**

**Max marks : 80**

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

**Essays**

**(2x15=30)**

1. Explain in detail about surface and material faults of a spectacle lenses and methods for their inspection.
2. Explain the effects of solar radiation on the ocular tissues and mention briefly on how reflecting filters protects the eye from these harmful radiations.

**Short notes**

**(5x5=25)**

3. Plus lenses on application of transverse movement test exhibit against motion and negative lenses exhibit with. Give reason.
4. A -15.00DS lens is made up in lenticular form using a 20mm aperture. The lens is mounted at a dioptrical distance of +37.00D from the eyes center of rotation. Calculate the angular field of view.
5. Laminated lenses.
6. What do we mean by image jump in bifocal lenses. Illustrate jump with an example and how can jump be eliminated.
7. Lenticular lenses.

**Answer briefly**

**(10x2 = 20)**

8. What is thickness difference of prism. What is the interrelation between apical angles and deviating angles of prisms.
9. What is the difference between ground prisms and decentered prisms.
10. Geneva lens measure.
11. Mention any two reasons to provide pantoscopic tilts.
12. Why are meniscus lenses preferred over flat form lenses.
13. Properties of any two plastic materials used in spectacle frames.
14. Explain spectacle magnifier.
15. Laminated lenses.
16. Mention the properties of PMMA.
17. Describe the parts of a progressive addition lens with a neat diagram.

**(P.T.O)**

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

18. Transpose the prescription into one of its alternate forms:

•+3.75DS/-1.25DC\*10

19. Which test would you employ to identify a cylindrical lens.

20. Mention any disadvantages of canada balsam.

21. When the lower, nasal portion of a lens shape is removed to allow for a better fit, it is called a \_\_\_\_\_ lens shape.

22. Mention any advantages of lenticular lenses.

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