

**B.Sc. (Hons.) IN OPTOMETRY AND
OPHTHALMIC TECHNIQUES (BSCHOT)**

Term-End Examination

December, 2016

00273

BOS-008 : DISPENSING OPTICS

Time : 3 hours

Maximum Marks : 70

Note :

- (i) *Part A – Answer any **four** questions. Each question carries 10 marks.*
- (ii) *Part B – Write short notes on any **six**. Each carries 5 marks.*

PART A

*Answer any **four** questions. Each question carries 10 marks.*

4×10=40

1. What are prisms ? List and explain the methods of incorporating prisms in spectacles.
2. Describe in detail, the various glass lens and plastic lens materials.
3. What do you understand by bifocal lenses ? Enumerate the terminology of bifocals. Explain the features of different types of bifocals.

4. Enumerate the various methods of specifying power. Explain the different ways of measuring power and uses of Geneva lens measure.
5. Describe in detail, the various manufacturing defects in ophthalmic lenses.
6. Describe the principle and advantages of Aspheric lenses.

PART B

Write short notes on any **six**. Each carries 5 marks. $6 \times 5 = 30$

7. (a) Errors in power of lens while generating power to lens
- (b) Special Purpose Frames
- (c) Antifog and Scratch Resistant Coatings
- (d) Sports Spectacles
- (e) Fresnel Prisms
- (f) Boxing System
- (g) Write down the spherical equivalent of the following prescriptions :
- (i) $-3.5 / -4.5 \times 76^\circ$
- (ii) $+3.0 / +1.5 \times 45^\circ$
- (iii) $+2.25 / -4.5 \times 76^\circ$
- (iv) $-2.0 \text{ cyl} \times 45^\circ$
- (v) $+4.0 \text{ cyl} \times 140^\circ$
- (h) Transpose the following in alternate forms :
- (i) $-5.00 / +1.00 \times 110^\circ$
- (ii) $+4.00 / +2.00 \times 90^\circ$
- (iii) $-5.00 \text{ cyl } 100^\circ$
- (iv) $+6.00 / -2.00 \times 180^\circ$
- (v) $+2.00 \text{ cyl } 40^\circ$
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