

I -B.OPTOM. SEM – I : WINTER - 2018

SUBJECT- DISPENSING OPTICS I

Date: Wednesday

Day: 28/11/2018

W-2018-3719

Time: -

Max. Marks:20

Note: Section A is given on a **SEPARATE** sheet and has to be answered on the same sheet. This sheet should be completed with the first 30 minutes of starting of the examination. This sheet with Section –A only will be collected by the supervisor.

Seat No.: _____

SECTION -A

Q.1 Fill in the blanks: **(10)**

- i) _____ power of an ophthalmic lens can be measured with Lensometer.
- ii) Horizontal measurement of one eye in spectacle frame is called _____.
- iii) Deviation is the property of _____.
- iv) The two meridians in sphero-cylindrical lens are called as _____ and _____.
- v) Plus cylinder form of -2.75 DS/-2.25 DCx115° is _____.
- vi) Plus lenses become _____ effective when moved closer to eyeball.
- vii) The blanks are converted into ophthalmic lenses by _____ process.
- viii) Butt portion is the part of _____.
- ix) Front surface= +2.50D, Back surface = -4.00D, the total lens power is _____.
- x) Angles measured in clockwise direction are _____.

Q.2 State True of False : **(05)**

- i) Ophthalmic lenses can have one flat surface.
- ii) Barrel distortion is generally seen in plus lenses.
- iii) In plus lenses as you go away from center towards periphery, Prismatic effect increases.
- iv) Spherical aberration is a problem mainly for big diameter lenses.
- v) Plano cylindrical lenses have only one axis.

Q.3 Match the following: **(05)**

- | Lens material | Refractive index |
|------------------|------------------|
| i) Polycarbonate | a) 1.498 |
| ii) MR 8 | b) 1.59 |
| iii) Trivex | c) 1.523 |
| iv) CR39 | d) 1.532 |
| v) Crown Glass | e) 1.60 |

Marks Obtained: _____

Signature of the Invigilator: _____

Signature of the Examiner: _____

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I - B. Optom. Sem-I : Winter- 2018
SUBJECT- DISPENSING OPTICS I

Date: Wednesday
Day: 28-11-2018

Time: 10:00AM-TO 1:00PM
Max. Marks: 50

W-2018 -3719

N.B.:

- 1) There are **THREE** Sections as
Section- **A**= objective type questions **20 Marks**
Section- **B**= Long questions **20 Marks**
Section- **C**= Short questions **30 Marks**
- 2) Section A is given on a separate sheet and has to be answered on the same sheet. This sheet should be completed with the first **30** minutes of starting of the examination. This sheet with Section-A only will be collected by the supervisor.
- 3) Section-B has **3** long questions and any **TWO** questions have to be answered on the separate sheet
- 4) Section C- has **6** short questions and any **FIVE** questions have to be answered on the separate answer sheet.
- 5) Draw neat labeled diagrams **WHEREVER** necessary.

SECTION -B

Q.4 Attempt any **TWO** of the following: (20)

- i) What is Prism? Explain in detail about properties and units of measurement of prisms and also explain how they are different from ophthalmic lenses.
- ii) Explain the process of converting ophthalmic lens blank into lens.
- iii) Explain in detail about frame measurement systems.

SECTION - C (30)

Q.5 Attempt any **FIVE** of the following:

- i) What is spectacle frame and mountings? Explain the parts of spectacle frame with diagram
- ii) Explain about Vertex power and Approximate power of lenses.
- iii) Explain spherical, cylindrical and toric lenses.
- iv) Explain the image formation seen in toric lenses with diagram.
- v) What is Prentice's rule? Explain by taking your own example in case where decentration is happening.
- vii) Solve the following example:
 $+1.50DS/-3.00DC \times 50^\circ$, B.C= +2.00D

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