I- B.Optom. Sem-I- SUMMER- 2019

SUBJECT- DISPENSING OPTICS- I

Date: Wednesday Time: -

Day: 27-03-2019 S-2019-4001 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) Angle formed by two refracting surfaces of prism is called as _____.

ii) Refractive Index is defined as _____.

iii) Pin cushion distortion is seen in _____.

iv) The plastic material which undergoes ir-reversible changes on heating is called as _____.

v) IPD stands for _____.

vi) Geneva Lens measure is the instrument used to measure _____ of lens.

vii) If the convex lens is decentered out, will induce _____prismatic effect.

viii) Rotation test is used to check for _____ type of lenses.

ix) The most common end piece construction in plastic frames is _____.

x) Vergence is defined as _____.

Q.2 State True of False : **(10)**

i) Oblique Astigmatism aberration occurs when a narrow beam of light passes obliquely through a cylindrical lens.

ii) Focimeter does not measure the surface power of lens.

iii) A negative lens has against movement.

iv) In a plano cylinderlens, axis meridian has maximum power.

v) Effective power of plus lens increases when taken away from eye.

vi) Convexo-concave is the form of plus lens.

vii) Deviation, dispersion and displacement are the properties of prisms.

viii) Palpebral aperture is the type of frame measurement.

ix) According to sign convention, the distances measured above optic axis are taken as negative.

x) Chromatic dispersion is directly proportional to abbe value.

Marks Obtained:_____ **Signature of the Invigilator:**_____

Signature of the Examiner:_____

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I -B.OPTOM. SEM – I : SUMMER - 2019
SUBJECT- DISPENSING OPTICS -I

Date: Wednesday
Day: 27/03/2019

S-2019-4001

Time: 02.00 PM TO 05.00 PM
Max. Marks: 50

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

i) Explain in detail terminology used in spectacle frames and its parts with diagrams.

ii) Write a full note on process of spherical lens surfacing.

iii) Write about ophthalmic lens materials with advantages and disadvantages.

SECTION - C **(30)**

Q.4 Attempt any **FIVE** of the following:

i) With the help of labeled diagram, explain Sturm's Conoid.

ii) What is Prentice Rule? Calculate Prismatic effect in +3.00D lens if it is decentered nasally by 3mm.

iii) Write note on Geneva Lens measure.

iv) Define Transposition. Transpose the following into all possible forms:
a) +2.00 DS/ -1.25 DC x 140 °
c) -1.00 DC x 90 , +3.00 DC x180 °

v) Compare spherical aberrations to that of Oblique Astigmatism.

vii) Differentiate Convex and Concave Lens.

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