

II-B. optom. sem-IV: SUMMER-2018

SUBJECT: OPTICS AND REFRACTION

Day: Saturday
Date: 28-04-2018.

Time: —
Max. Marks: 20

S-2018-3566

N.B:

Section-A is given on a SEPARATE sheet and has to answer on the same sheet. This sheet should be completed within the first 30 minutes of starting of the examination. This sheet Section-A only will be collected by the supervisor.

Seat No. _____

SECTION-A

Q.1 Fill in the blanks: (20)

- 1) The steeper form achieved by using negative root of Jalie's expression is called as _____.
- 2) "Tan i = n" represents _____.
- 3) _____ is the angle formed by a line parallel to the rim of the frame where it rest on the nose and the perpendicular line dividing the nose.
- 4) Material used for SRC is _____.
- 5) Hydrophobic coating is a special layer of _____ over the top layer of AR coating.
- 6) Polycarbonate lens should not be cleaned with _____.
- 7) _____ is used to obtain green tinted lens.
- 8) Fitting height too high in PALs can lead to _____.
- 9) Grey tint allows _____ transmission through the whole visible spectrum.
- 10) Normal transmission for sun lens is generally between _____.

P.T.O.

- 11) _____ is the best bifocal suggested for Hyperopes.
- 12) _____ tilt is given in Billiard spectacles.
- 13) The abrasive powder used for roughing step is _____.
- 14) Distance between the two micro etchings in PALs is _____.
- 15) When vertical prism is present in PALs, the monocular PD should be _____ per prism diopter of base in prism.
- 16) My style product belongs to _____.
- 17) Material used for manufacturing plastic photo chromatic is _____.
- 18) Trans bonding is a method to manufacture _____.
- 19) For 8mm of pantoscopic tilt, the optical centre is _____ by 4mm in aspheric lens.
- 20) Effective power of a plus lens _____ when moved towards the eye.

Marks Obtained: _____

Signature of Invigilator: _____

Signature of Examiner: _____

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II -B.OPTOM. SEM – IV : SUMMER - 2018

SUBJECT: OPTICS AND REFRACTION

Day: **Saturday**
Date: **28/04/2018**

S-2018-3566

Time: **10.00 AM TO 01.00 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 = 20 marks
- 2) **Section-A** is given on a **SEPARATE** sheet and has to be answered on the **SAME** sheet. This sheet should be completed within 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** answer sheet.
- 4) Section C has short questions and **ANY FIVE** questions have to be answered on the **SEPARATE** answer sheet.
- 5) Draw neat labeled diagrams **WHEREVER** necessary.

SECTION-B

Attempt **ANY TWO** of the following: **(20)**

- Q.1** Write in detail about factors to be considered for dispensing and fitting PALs. Discuss about the progressive addition lens marking; lay out card and their importance.
- Q.2** Write in detail about special purpose frames.
- Q.3** Write in detail about polarizing lenses.

SECTION-C

Attempt **ANY FIVE** of the following: **(30)**

- a) Explain about principle of ARC and its indications with diagram.
- b) Write a note on types of lenticular lenses.
- c) Write a note on various tints, its manufacturing and uses.
- d) Write a note on use of Fresnel prisms.
- e) Write a short note on Plastic photo chromatic lenses.
- f) Calculate:
 - i) A prescription reads as follow: RE: -1.75/ -0.75 ×180 LE: -0.50/ - 0.75× 180 Add: +2.00 OU. The wearer wants a pair for distance and a pair for reading. What powers would be ordered for reading glass.
 - ii) A patient requires the distance prescription of -3.00 DS with +2.00DS add OU. What is the amount of image jump for
 - a) A 22 mm round fused bifocal segment
 - b) A 22 mm straight top segment
 - c) A 38 mm ultex segment
 - d) Executive bifocal

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