

FIRST YEAR M. OPTOM. : SUMMER - 2018
SUBJECT: APPLIED OPTICS

Day: **Tuesday**
Date: **17/04/2018**

Time: **09.30 A.M. TO 11.30 A.M.**
Max. Marks: 50

S-2018-3575

N.B:

- 1) Answer Section-A and Section-B on **SEPARATE** answer sheets.
- 2) Section-A is of objective questions for total **20** marks.
- 3) Section B is of short questions for total **30** marks.

SECTION-A

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

- 1) Equally divide the prisms in following prescription RE 8 Δ D B. U.
_____.
- 2) In patients with malposition of the lower lid, _____ gives a more accurate measurement of ptosis than the inter palpebral fissure.
- 3) The geometrical center distance of a frame is same as _____.
- 4) _____ anisometropia is better corrected with spectacle lenses.
- 5) The birefringence patterns seen in thermal tempering are usually characterized as _____ patterns.
- 6) The Fresnel press-on prism are made up of _____ material with a refractive index of _____.
- 7) Describe 10 K GF 1/20 52 \square 18 marking on frame _____.
- 8) A _____ is used to measure vertex distance.
- 9) According to Stephens and Davis polycarbonate has _____ times the impact resistance than CR- 39.
- 10) _____ experienced through aphakic spectacle lens is also known as Jack in the box phenomenon.

Q.2 State True or False. Give reason in short: **(10)**

- 1) In amblyopia stereo acuity is always reduced.
- 2) AR coating of the back surface of sunglasses is not advisable.
- 3) A lens has the power + 4.00 DS/ +2.00 DC x 90^0 , the vertical focal length is at 50 cm.
- 4) Dividing the strength of the prism between the two eyes improves the comfort of the patient.
- 5) Nicol prism can be used to form an erect image.

P.T.O.

- 6) Lenticular astigmatism can not be corrected with the help of contact lenses.
- 7) Presbyopia tends to occur earlier in uncorrected than corrected hypermetropia.
- 8) Back vertex distance is directly related to the back vertex power.
- 9) Myopic shift occurs with posterior shift of the lens.
- 10) Atropine is a muscarinic cholinergic antagonist.

SECTION-B

Q.3 Attempt **ANY SIX** of the following: **(30)**

- 1) Write a note on dynamic retinoscopy.
- 2) Write a note on "Spherical Equivalent" and its significance in optical correction.
- 3) Explain the Fresnel's Principle and write advantages and disadvantages of Aspheric lenses.
- 4) Write about working, principles, uses and limitations of following.
 - i) W. 4. D. Test.
 - ii) FRIEND Test.
 - iii) Jackson's Cross Cylinder
- 5) By giving example explain how ocular accommodation differs from spectacle accommodation.
- 6) What are the important points you should consider while dispensing high powered lenses?
- 7) Write a note on Knapp's law. What are its limitations?

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