

SECOND YEAR M. OPTOM. : SUMMER - 2018
SUBJECT: DISPENSING OPTICS AND LOW VISION

Day: **Thursday**
Date: **19/04/2018**

S-2018-3581

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

N.B.:

- 1) Answer the Section-A and Section-B on two **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.
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SECTION-A

Q.1 Fill in the blanks: (10)

- 1) A+12.00 Ds reading addition has a working distance of _____ cm.
- 2) The index of refraction of the Anti Reflection coating should be _____ to satisfy the amplitude condition for crown glass.
- 3) _____ should be just noticeable difference for a visual acuity of 20/400.
- 4) Exit pupil size for a telescope, which is marked 7X49 will be _____ mm.
- 5) In a lens of power +2.00 DS/ +4.00 DC X 90⁰, the vertical focal line is at _____ cm.
- 6) If the front surface curvature is + 4.00 Ds, back surface curvature is -6.00 D x 90⁰, -7.00 D x 180⁰, _____ is the base curve.
- 7) _____ minification is obtained, when a patient views through a -12.0 Ds lens held at 40 cm from the eye.
- 8) In patients with low vision, telescope used for distant viewing can be modified for close viewing by adding _____.
- 9) A student, who is visually impaired presents for an eye examination & reports that he is having problem reading his textbook. You pick one typical page from book & count 75 letters & spaces in a 3 – inch line of text. Snellen's equivalent size of this print is _____.
- 10) For patients who have fields less than 6 degrees, the recommended size of the field – expanding channel lens is _____ mm.

Q.2 State True or False (Give reason) (10)

- 1) The magnification of a telescope is determined experimentally by exit pupil diameter/ entrance pupil diameter.
 - 2) In half eye microscopes standard available power are upto +12.00 D: as a patient can not maintain binocularity when reading at a distance closer than 8 cm.
 - 3) In multiple pinhole glasses, the distance between holes should be equal to or lesser than the size of the patient's pupil under normal illumination.
 - 4) Visual field abnormalities can have a significant effect on response to visual acuity testing procedures.
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- 5) Individuals with rod monochromatism typically demonstrate higher levels of visual acuity under dimmer testing conditions.
- 6) When performing a brightness acuity test on a low vision patient, a decrease of two or more lines of visual acuity may indicate glare problems.
- 7) When a patient requires a cylindrical correction in his or her distance prescription, the same amount of cylinder has to be incorporated into his or her microscope.
- 8) Both the LVES & the V- max can be used by patients with advanced retinitis pigmentosa to help in their mobility.
- 9) When recommending a monitor for a patient, it is best to recommend the highest dot pitch available because this will provide a sharper image on the screen.
- 10) Observation of behavioral changes may frequently be the best indicator that diplopia is present or that neutralization of the diplopia has been attained.

SECTION – B

Q.3 Answer any **SIX** of the following: **(6 x 5 marks)** **(30)**

- 1) Write a note on Near variable focus lenses.
- 2) What are the methods of verification of the magnification of a telescope?
- 3) Explain concept of Atoric lenses.
- 4) What are Best form lenses?
- 5) Write in detail about prescribing pinhole spectacles.
- 6) Explain how refraction in low vision patient is different then regular patient.
- 7) Write a note on Fresnel's prism.

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