

BACHELOR OF CLINICAL OPTOMETRY
II-B. Optometry Sem-III : WINTER- 2022
SUBJECT : VISUAL OPTICS (T)

Day : Monday

Time : 10:00 AM-01:00 PM

Date : 12/12/2022

W-836-2022

Max. Marks : 20

N.B.:

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.

Seat No.: _____

Date: _____

SECTION-A

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

- i) Spherical equivalent of $+12.25/-5.50 \times 85^\circ$ is _____.
- ii) Keratometry reading is 40 D, axial length is 22.5 mm and refractive error is -3.50 Dsph. The type of myopia is _____.
- iii) Constriction of pupil during accommodation helps in increasing the _____.
- iv) Orbital mass lesion causes _____ refractive status.
- v) If retinoscopic glow is neutralized at 0.5 meters with -2.00 Dsph lens, then _____ will be its net retinoscopy value.
- vi) For -4.25 Ds / -2.25 Dcyl $\times 90^\circ$ refractive error, if corneal astigmatism is 44.50 in horizontal meridian and 43.75 in vertical, then _____ is the internal astigmatism.
- vii) Full form of NPC is _____.
- viii) In strum's conoid, distance between the focal line is _____.
- ix) A majority of myopes have _____ AC/A ratio and hyperopes have _____ AC/A ratio.
- x) When one eye is hyperopic and other eye is myopic, the condition is called _____.

Q.2 State true or false: **(10)**

- i) If corneal astigmatism is -1.50 Dcyl $\times 180^\circ$, virtually no refractive astigmatic error is expected.
- ii) Duochrome test can be done in pseudophakic eyes.
- iii) Using the RAF ruler, NPA of patient can be tested.
- iv) $+3.00 \text{ Ds} / -1.00 \text{ Dcyl} \times 180^\circ$ is an example of with the rule astigmatism.

P.T.O.

- v) The strongest convex lens during subjective refraction will correct absolute hyperopia.
- vi) In high myopic patient, angle formed by visual axis and optical axis is smaller.
- vii) The retinoscopic reflex originates at retinal pigment epithelium layer of retina, in adults.
- viii) Fogging technique is used to stimulate accommodation during refraction.
- ix) Forster – Fuchs’-Spot is a sign of fundus in an astigmatic eye.
- x) OCT is used to measure anterior corneal curvature.

Total Marks Obtained _____

Signature of the Invigilator _____

Signature of the Examiner _____

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Max. Marks : **50**

N.B.:

- 1) There are **THREE** sections as:
Section- A Objective types 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 within the first 30 minutes of starting 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 **SEPARATE** answer sheet.
 - 4) Section C has 6 short questions and any **FIVE** questions have to be answered on **SEPARATE** answer sheet.
 - 5) Draw neat labeled diagram **WHEREVER** necessary.
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SECTION-B

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

- i) Explain in detail about Dynamic Retinoscopy. Also write about the principle it is based upon. Explain any one procedure in detail.
- ii) Calculate ocular accommodation for an emmetropic patient, a 10 Dsph myopic patient and a 10 Dsph hyperopic patient.
- iii) Write refractive guidelines for hyperopic adults.

SECTION -C

Q.4 Attempt any **FIVE** of the following: **(30)**

- i) Write a note on cycloplegic refraction.
- ii) Explain principles of JCC. What are its uses, write about any one of them in detail.
- iii) Explain duochrome test in detail.
- iv) Write about presbyopia, its signs, symptoms, etiological factors and management.
- v) Discuss the techniques for the clinical measurement of convergence.
- vi) What is spherical anisometropia? How will you manage it?