

II – B. OPTOM. SEM– III : SUMMER - 2018
SUBJECT: VISUAL OPTICS

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

S-2018-3563

Time: _____
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)**

- a) If Keratometer reading is K_H 44.50 D and K_V 46.50 D, _____ is the amount of corneal astigmatism and _____ will be type of astigmatism.
- b) The amplitude of accommodation is _____ in aphakic eye.
- c) If the axial length is 25.5 mm considering curvature of cornea is normal, _____ amount will be the refractive error.
- d) The unit of measurement of physiological accommodation is _____.
- e) Pincushion phenomenon is seen in _____.
- f) _____ is the principle of Duochrome test.
- g) In myopes fundus appears like _____.
- h) When one eye is hyperopic and the other is myopic the condition is called _____.
- i) _____ Prism base is placed to check positive fusional convergence.
- j) Full form of NPC is _____.

P.T.O.

Q.2 State **TRUE** or **FALSE**. If **FALSE** give reasons. **(10)**

- a) In Jackson's cross cylinder, the cylindrical component is twice the power of sphere with opposite sign.
- b) $-2.00 / -1.00 \times 90^0$ is an example of against the rule astigmatism.
- c) A man aged 60 years can read without any spectacle is experienced to be a hypermetrope.
- d) Third purkinje image is formed on posterior surface of lens.
- e) Refractive index of cornea is 1.376.
- f) JCC handle is placed parallel to correcting cylinder axis for refining the cylinder axis.
- g) The ratio of image size to object size is called as magnification.
- h) Doubling prism is used in phoropter.
- i) Worth four dot test is based on principle called color dissociation.
- j) In Logmar visual acuity chart one letter is 0.02 log units.

Signature of the Invigilator

Total Marks Obtained _____

Signature of the Examiner

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II- B. Optom. Sem-III: SUMMER-2018

SUBJECT: VISUAL OPTICS

Day: Tuesday

Date: 17-04-2018

S-2018-3563

Time: 2:00 PM TO 5:00 PM.

Max. Marks: 70

N.B.:

- 1) There are **THREE** Sections as –
Section A – Objectives 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 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 Explain cycloplegic drugs and its types? Write a note on cycloplegic refraction.
- Q.2 What is static retinoscopy? Draw and explain optics of retinoscopy in case of 5 Diopters of hypermetropia and write about characteristics of the retinoscopic reflex.
- Q.3 Write a detail note on Presbyopia.

SECTION - C

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

- Q.1 What is Jackson's cross cylinder? On what principle does it work? Give an example to describe it.
- Q.2 Define convergence and explain measurement of convergence.
- Q.3 Explain fogging technique.
- Q.4 Errors in writing the prescription to the patient.
- Q.5 Covert the following in meters, feet, MAR, LogMAR value and VAR value.
 - i) Logmar value = 1
 - ii) 20/120
 - iii) VAR = 100
- Q.6 Compare Retinoscope and autorefractometer.

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