

CS/B.OPTM/SEM-4/BO-403/2013

2013

CLINICAL REFRACTION - I

Time Allotted : 3 Hours

Full Marks : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words

as far as practicable.

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following : 10x1 = 10

i) The condition where focus of one principal meridian is

at outer limiting membrane of retina is known as

- a) circle of least confusion
- b) point of greatest contrast
- c) strums conoid
- d) none of these.

ii) Aniso-oxypia refers to

- a) unequal V.A. in two eyes
- b) unequal refractive error in two eyes
- c) unequal accommodation in two eyes
- d) none of these.

iii) The spherical equivalent of JCC is

- a) + 1 b) – 1
- c) 0 d) 2.

iv) Cycloplegic refraction is contraindicated in

- a) young hyperopic b) esophoria
- c) glaucoma d) children < 7 yrs.

v) Straddling method of Retinoscopy is used to

- a) refine cyl axis b) refine sph. power
- c) both of these d) none of these.

- vi) The amplitude of accommodation of a person having far point α and near point at 10 cm is
- a) 10D b) 1D
 - c) 1.5D d) None of these.
- vii) Duochrome test is used in all *except*
- a) Check cylinder correction
 - b) Check sph. over or under correction
 - c) Binocular balancing
 - d) Determination of presbyopic addition.
- viii) Pinhole increases V.A. by
- a) reducing the size of blur circle
 - b) increasing the size of blur circle
 - c) cutting of peripheral rays
 - d) both (a) & (c).
- ix) Near point of accommodation is measured by
- a) RAF ruler b) Diploscope
 - c) Cycloplegia d) Fogging method.
- x) At the end of retinoscopy on slight forward movement of examiner's head, the movement of the reflex is obtained
- a) with b) against
 - c) nil movement d) rapid movement.

GROUP – B

(Short Answer Type Questions)

Write short notes on any *three* of the following.

3x5 = 15

2. Corneal curvature measurement by Keratometry.
3. Subjective refracton.
4. Neutralisation of sphero-cylindrical spectacle lenses.
5. Pinhole.

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

6. a) What is clinical refraction ?
- b) What is the importance of taking history before refraction ? Write down the steps of monocular subjective refraction. Discuss the use of Bailey-Lovie chart as compared to Snellen chart. $2 + 5 + 3 + 5$
7. a) Explain the characteristics of streak reflex which helps you to determine nature of refractive error.
- b) What is fogging technique ?
- c) What is JCC ? Explain the optical basis of cyl. power determination with JCC. $4 + 4 + 2 + 5$
8. a) Explain the optical principle of duochrome test & its utility in monocular subjective refraction.
- b) Briefly describe any *three* methods by which we can determine presbyopic addition. $3 + 5 + 7$
9. a) Name the cycloplegic agents used for refraction.
- b) When is cycloplegic refraction indicated ?
- c) What pre-examinations should be done before cycloplegic refraction ?
- d) How much tonus allowance should be reduced during final refraction ? $3 + 4 + 4 + 4$
10. a) Describe the Borish delayed technique.
- b) Explain slit refraction.
- c) What is Presbyopia ? $5 + 8 + 2$

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