



Name :

Roll No. :

Invigilator's Signature :

**CS/B.OPTM/SEM-3/BO-305/2012-13
2012**

**OPHTHALMIC & OPTICAL INSTRUMENTATION &
PROCEDURE-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 any *ten* of the following :
10 × 1 = 10

i) Keratometer measures corneal

- a) dioptric value b) radius of curvature
- c) thickness d) diameter.

ii) The focimeter is the instrument that is used to
determine

- a) lens dioptric value b) lens curvature
- c) lens thickness d) none of these.

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- iii) Autorefractometer gives us
- a) objective refraction b) subjective refraction
 - c) cycloplegic refraction d) none of these.
- iv) In a slit lamp the eyepiece usually has a lens of
- a) + 10D b) + 20D
 - c) + 22D d) + 40D.
- v) Cycloplegics are used in retinoscopy in patients with
- a) high hypermetropia b) high myopia
 - c) high astigmatism d) aphakic patients.
- vi) The far point of an emmetropic eye is
- a) at infinity
 - b) behind the eye
 - c) between eye and infinity
 - d) none of these.
- vii) In indirect Ophthalmoscopy the image is
- a) real b) inverted
 - c) magnified d) all of these.
- viii) Distant direct Ophthalmoscopy done from a distance of
- a) 10 cm b) 20 cm
 - c) 22-25 cm d) 50-60 cm.



- ix) Aqueous flare is best seen with
- a) Conical beam
 - b) Specular reflection
 - c) Sclerotic scatter
 - d) none of these.
- x) The blue filter in slit lamp is used for examining
- a) aqueous flare
 - b) hypopyon
 - c) fluorescein staining
 - d) an implanted IOL.
- xi) Astronomical telescope produces
- a) real image
 - b) inverted image
 - c) reversed image
 - d) none of these.

GROUP - B

(Short Answer Type Questions)

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

$3 \times 5 = 15$

2. Maddox rod
3. Trial box
4. Construction of Suellen's chart
5. Subjective versus objective refraction.

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GROUP - C
(Long Answer Type Questions)

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

6. What are the parts of a streak retinoscope ? Explain with diagram. What is neutralization ? Explain with diagrams. How can you determine the axis of astigmatic error using streak retinoscope ? $5 + 5 + 5$
7. a) Describe the various illumination techniques used in slit lamp biomicroscopy and uses of it.
- b) With help of a diagram explain and derive the expression for magnification in Galilean telescope. $8 + 7$
8. Describe the optical principle and uses of lensometer.
9. Discuss the principles involved, the technique used and the advantages of application Tonometry. $5 + 5 + 5$
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