

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 :  
 $10 \times 1 = 10$

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

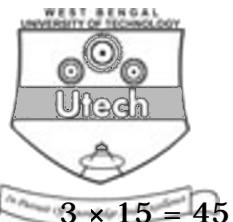
**GROUP - B**

**( 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.



**GROUP - C**  
**( Long Answer Type Questions )**  
Answer any three of the following.

6. What are the parts of a streak retiniscopic ? Explain with diagram. What is neutralization ? Explain with diagrams. How can you determine the axis of astigmatic error using streak retiniscopic ? 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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