

2013

**OPHTHALMIC & OPTICAL
INSTRUMENTATION &
PROCEDURE – II**

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) Applanation tonometry is based on

- a) Pascal's Law b) Imbert-Ficks Law
c) Hering's Law d) None of these.

ii) Absence of green sensitivity of retina is called

- a) Deuteranopia b) Protanopia
c) Tritanopia d) none of these.

iii) Errors may occur during applanation tonometry due to

- a) irregular Cornea
b) excess fluorescein
c) faulty calibration of instrument
d) scleral rigidity.

iv) In Humphrey autoperimetry the unit of illumination is

- a) apostilbs
b) candles
c) decibels

- d) lumen.**
- v) All are true of Schiötz tonometry except**
 - a) indentation of cornea**
 - b) normogram necessary**
 - c) topical anaesthesia needed**
 - d) more reliable than applanation tonometry.**
- vi) Eximer laser is used for**
 - a) PRK**
 - b) Capsultomy**
 - c) Retinal photocoagulation**
 - d) all of these**
 - e) none of these.**
- vii) Hyperfluorescence of FFA occurs in**
 - a) leakage from blood vessels**
 - b) loss of pigment**
 - c) fluid accumulation**
 - d) all of these**
 - e) none of these.**
- viii) B-scan is used to diagnose**
 - a) axial length b) retinal detachment**
 - c) proptosis d) all of these.**
- ix) Ophthalmic ultrasound uses a frequency of**
 - a) 20 kHz b) 100 kHz**
 - c) 50 kHz d) 30 kHz.**
- x) Laser has the following properties except**
 - a) it is monochromatic b) collimated**
 - c) non-polarised d) coherent.**

GROUP – B

(Short Answer Type Questions)

Write short notes on any three of the following.

$$3 \times 5 = 15$$

2. Yag laser use in ophthalmology.
3. 'Superior arcuate defect' found during perimetry in a glaucoma patient.
4. Use of A-scan in 10 L power calculation.
5. Reliability parameters in a Humphrey visual field report print-out.

GROUP – C

(Long Answer Type Questions)

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

6. a) Mention the types of contrast sensitivity in brief.
- b) Explain the use of Arden gratings.
- c) Discuss the neural mechanism of contrast sensitivity.

$$3 + 5 + 7$$

7. a) Mention the differences between static perimetry and kinetic perimetry.

b) Draw and describe 3 important glaucomatous field defects commonly seen in an HVF report. $6 + 9$

8. a) Discuss 'Lasers in ophthalmology'.

b) Discuss the possible sources of 'error' in perimetry report. $10 + 5$

9. a) What is Pachymetry ? What are the important methods of Pachymetry ? Write in detail, about the importance of Pachymetry (CCT) in relation to glaucoma.

b) Write on the devices for colour vision testing.

$$(2 + 4 + 3) + 6$$