



BRAINWARE UNIVERSITY

Term End Examination 2023-2024 Programme – B.Optometry-2021/B.Optometry-2022 Course Name – Optometric Instrumentation Course Code - BOPTOC302 (Semester III)

Full Marks: 60

Time: 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

- Choose the correct alternative from the following :
- (i) Which part of the eye is responsible for producing the highest echo spikes on an A-scan waveform?
 - a) Cornea

b) Lens

c) Retina

- d) Sclera
- (ii) A-scan biometry is useful for calculating the power of an intraocular lens because it provides information about:
 - a) The color of the iris

- b) The shape of the pupil
- c) The density of the vitreous humor
- d) The axial length of the eye
- (iii) What is the primary function of a keratometer?
 - a) Measuring intraocular pressure
- b) Assessing corneal curvature
- c) Evaluating retinal health
- d) Examining the lens power
- (iv) Which unit of measurement is commonly used for corneal curvature in keratometry?
 - a) Diopters (D)

b) Millimeters (mm)

c) Pascals (Pa)

- d) Newtons (N)
- (v) Which part of the eye does a keratometer primarily focus on for measurement?
 - a) Lens

b) Sclera

c) Cornea

- d) Retina
- (vi) In static retinoscopy, a "with" movement indicates:
 - a) Overcorrection

b) Undercorrection

c) Emmetropia

- d) Astigmatism
- (vii) Which type of retinoscopy is primarily used to assess the accommodative system?
 - a) Static retinoscopy

b) Dynamic retinoscopy

c) Near retinoscopy

- d) Cycloplegic retinoscopy
- (viii) Which condition can be detected or monitored using keratometry?
 - a) Glaucoma

b) Cataracts

c) Corneal astigmatism

d) Macular degeneration

	(ix)	ix) Which part of the eye does a keratometer specifically measure?		
		a) Lens thickness c) Iris diameter Which of the following structures is NOT typica biomicroscopy?	b) Corneal curvatured) Retinal thickness	
	(xi)	a) Irisc) retinaIn a Snellen chart, what does the denominator	b) lens d) optic nerve of the Snellen fraction represent?	
	(xii)	a) The distance at which the chart is read c) The distance at which the average person can read the chart which of the following cells in the human eye is responsible for color vision?		letters
	(xiii)	a) Rods c) Rodopsins) What is the primary function of a manual lenso	b) Cones d) Photoreceptors meter?	
	 a) Measuring visual acuity b) Measuring the thickness of eyeglass lenses c) Measuring the curvature of eyeglass lenses d) Measuring the power of eyeglass lenses (xiv) In an Ishihara chart, what type of numbers or symbols are typically hidden within the colored dots? 			
	(xv)	a) Letters c) Animals What is the name for the phenomenon where i different number or symbol on an Ishihara plate		
		a) Color confusion c) Color distortion	b) Color inversiond) Color shift	
		Grou (Short Answer Ty	· · · · · · · · · · · · · · · · · · ·	3 x 5=15
 3. What is a trial box and how is it used in experimental research? 4. Explain the purpose of a trial frame in optometry and how it is used during eye examinations. 5. Name the different parts of human eye which we can examine using the slit lamp technique. 				(3) (3) (3)
				(3)
				(3)
	D	escribe the illumination stage of retinoscope in c		(3)
		Grou (Long Answer Ty	•	5 x 6=30
	h	. What are the common indications for using direct ophthalmoscopy in clinical practice, an how does it aid in diagnosing eye conditions? Provide examples of specific eye abnormalities that can be detected with this technique.		
 8. What is the standard unit of measurement for visual acuity, and how is it expressed? 9. How will you prepare the patients before doing the B-scan? 10. Discuss the psychometric properties and advantages of the ETDRS chart over tradition Snellen charts for assessing visual acuity, especially in clinical trials and research setti 11. Explain the basic principle of a pinhole disc and how it can be used as a diagnostic too optometry. Provide examples of specific eye conditions that can be assessed using a pinhole disc. 			sual acuity, and how is it expressed? he B-scan?	(5) (5) (5)
			lly in clinical trials and research settings ow it can be used as a diagnostic tool ir	•