BRAINWARE UNIVERSITY

Term End Examination 2020 - 21

Programme – Bachelor of Optometry

Course Name – Optometric Instrumentation

Course Code - BOPTO304

Semester / Year - Semester III

Time allotted : 75 Minutes Full Marks : 60

[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 60=60

1. *(Answer any Sixty)*

(i) False about Indirect Ophthalmoscope

a) It produces an inverted real image about 2-5 times magnification

b) Stereopsis is absent

c) Area of the field in focus is about 8 disc diameter

d) Fundus can be viewed upto Ora Serrate

(ii) The instrument used to measure corneal thickness is

a) Pachymeter

b) Field Analyzer

c) Keratometer

d) Slit lamp Biomicroscopy

(iii) Deep anterior chamber is seen in Slitlamp in

a) Aphakia

b) Keratoconus

c) Hypermature Cataract

d) All of these

(iv) Which of the following is used for measuring IOP in a scarred Cornea

a) GAT

b) Perkin’s Hand Held

c) Tonopen

d) Pulsair

(v) In Slit lamp Biomicroscopy Retro Illumination is used to check

a) Epithelial Edema

b) Lashes

c) Contact lens fitting

d) Scleral Rigidity

(vi) Which ray is least deviated by a prism?

a) Violet

b) Red

c) Green

d) Yellow

(vii) Regarding visual acuity which is not true:

a) it can be represented by a reciprocal of the minimum angle of resolution

b) itdoes not vary with the region of the retina

c) it is affected by general illumination

d) it is affected by the colour of the test objects

(viii) The stenopaeic slit

a) can be used to find the principal axes of astigmatism

b) is a pinhole that reduces blur resulting from ametropia in the meridian perpendicular to the slit

c) can be used to find the best position for optical iridectomy in a patient with corneal scarring

d) None of these

(ix) Jackson's cross cylinder

a) does not blur the image when placed before an emmetropic eye

b) does not change the interval of Sturm according to the position of the Sturm

c) does alter the spherical equivalent of an ametropic eye

d) is used to check the axis and power of the cylinder subjectively

(x) Amsler grid is used in

a) Detecting Maculopathy

b) Optic disc examination

c) Squint

d) Retinal Examination

(xi) Coloured Halos are seen in all except

a) Cataract

b) Angle closure Glaucoma

c) Corneal Edema

d) Corneal Opacity

(xii) The direct ophthalmoscope:

a) gives an angular magnification of 20X

b) gives a real erect image

c) makes the disc of a hypermetrope larger than that of an emmetrope

d) is better than indirect ophthalmoscope in detecting diabetic maculopathy

(xiii) Regarding the condensing lenses used in indirect ophthalmoscope all are true except:

a) it is usually spherical to reduce aberration

b) the image formed is located at or near the first principal focus of the condensing lens

c) the stronger the condensing lens used the higher the angular magnification

d) the stronger the condensing lens used the larger the field of vision

(xiv) Conditions that cause a superior visual field defect exclude

a) Cataract

b) Ptosis

c) BRVO

d) Dermatochalasis

(xv) The following is true about the techniques used in slit-lamp:

a) uncoupling of the microscope and light source is needed in sclerotic illumination

b) specular illumination is best for visualizing the endothelium

c) the light and the microscope are co-axial in retro illumination

d) All of these

(xvi) Area of fundus seen with direct ophthalmoscope

a) 1DD

b) 2DD

c) 3DD

d) 5DD

(xvii) All of the following are characteristics of the image formed on Indirect Ophthalmoscopy excepts

a) Virtual

b) Inverted

c) Magnified

d) Formed between the convex lens and the observer

(xviii) Biomicroscopic examination of the fundus is performed with the help of

a) -58.6 D Hurby lens

b) +78D LENS

c) Both -58.6 D Hurby lens and +78D LENS

d) All are wrong

(xix) Small opacities in the media of eye are best detected by

a) Distant direct ophthalmoscoope

b) Retiniscope

c) Tonometer

d) Indirect Ophthalmoscope

(xx) Dark adaptation is delayed in all of the following conditions except

a) Vitamin A Deficiency

b) Pigmentary retinal dystrophy

c) POAG

d) Heredomacular degeneration

(xxi) In ERG the b-wave represents the activity of

a) Rods and cones

b) Bipolar cells

c) Horizontal cells

d) Ganglion cells

(xxii) While performing GAT, Conjunctiva is stained with

a) Rose Bengal Dye

b) Fluorescein Dye

c) Alcian Blue Dye

d) Sodium Dye

(xxiii) Fluorescein angiography is used to identify lesions in all except

a) Retina

b) Lens

c) Central retinal artery

d) Optic nerve head

(xxiv) Landot’s broken ring test is used for testing

a) Form sense

b) Contrast sense

c) Central field

d) Scotopic Vision

(xxv) When using a direct ophthalmoscope, the field of view:

a) is about 6 degrees

b) is larger in an eye dilated with mydriatic

c) is smaller than that through an indirect ophthalmoscope

d) all of these

(xxvi) Magnification of Astronomical Telescope is

a) f0+fe

b) f0/fe

c) Fe/f0

d) (1+f0/fe)L/f0

(xxvii) In which of the following instruments, the objective has a large focal length and a very large eyepiece?

a) A simple microscope

b) Telescope

c) A compound microscope

d) Abberometer

(xxviii) Which is a colour Vision test?

a) Peli Robson Chart

b) Ishihara Chart

c) Bailey Lovie Log MAR chart

d) Perimetry

(xxix) A focimeter measures the _____ of a lens

a) BVP

b) FVP

c) Curvature

d) Radius

(xxx) In colour vision testing which is True?

a) The colours of the Farnsworth-Munsell hue 80 test differs in hue and saturation

b) Ishihara test plates are designed mainly for congenital red-green colour defects

c) Ishihara test plates can be used by pre-verbal children

d) Lanthony New Colour Test is only suitable for adults

(xxxi) During indirect ophthalmoscopy:

a) image size in emmetrope remains the

b) image from hyperopic retina always falls

same irrespective of the position of the condensing lens

within the second principal focus of the condensing lens

c) image size in myope increases when the condensing lens moves towards the eye of the patient

d) image size in hypermetrope decreases when the condensing lens moves towards the eye of the patient

(xxxii) White pupillary reflex is seen in

a) Retinoblastoma

b) Complete RD

c) Endopthalmitis

d) All of these

(xxxiii) The image in Indirect Opthalmoscope is

a) Erect,Virtual,magnified

b) Inverted,virtual,normal

c) Inverted,real,magnified

d) All are wrong

(xxxiv) Examination of vitreous is best done with

a) Direct Opthalmoscope

b) Indirect Opthalmoscope

c) Oblique Illumination

d) Slitlamp with CL

(xxxv) Periphery of retina is best seen with

a) Retinoscope

b) USG

c) Direct Ophthalmoscope

d) Indirect Ophthalmoscope

(xxxvi) The Electroretinogram may assist in the diagnosis of all of the following except

a) Bilateral disease

b) Progression of retinal disease

c) Complications of glaucoma

d) Clinically unsuspected disease in familial degeneration

(xxxvii) In Band Keratopathy,which process should be done to measure IOP?

a) Tonopen

b) GAT

c) Indentation

d) All of these

(xxxviii) The ability to maintain of the visual gaze on a single location

a) Fixation
b) Isopter
c) Threshold
d) Scotoma

(xxxix) An interruption or break in the visual field ,surrounded by a remaining normal visual field

a) Hill of vision
b) Scotoma
c) Amsler grid
d) All are wrong

(xl) Factors affecting Automated perimetry includes

a) Facial asymmetry
b) Refractive error
c) Miosis
d) All of these

(xli) In HVF report,GPA stands for

a) Grade Point Average
b) Guided Proficiency Average
c) Gradual Progression Analysis
d) Guided Progression Analysis

(xlii) The Keratometric value can be wrong due to

a) Abnormal lid position
b) Excessive tearing
c) Localized corneal distortion
d) All of these

(xliii) Factors affecting tonometry value does not include

a) CCT
b) Corneal curvature
c) Visual field
d) Ocular rigidity

(xliv) Falsely high reading of IOP can be seen in

a) Inadequate fluorescence
b) Thick Cornea
c) Prolong contact
d) All are wrong

(xlv) An ideal Tonometer should

a) give accurate and reasonable IOP
b) frequently callibrated

measurement

c) Complex to use

d) Not use in high refractive error

(xlvi) The crystalline lens:

a) has an in-situ effective power of +15.00D

b) contributes more power than the cornea towards the refraction of the eye

c) if extracted without implant can correct myopia who needs spectacle correction of -15.00D

d) has a longer radius of curvature anteriorly than posteriorly

(xlvii) The advantages of indirect ophthalmoscope over direct ophthalmoscope include:

a) erect image

b) higher magnification

c) the instrument is smaller size

d) binocular view

(xlviii) Sclerotic Scatter is used to determine

a) Dystrophy

b) Endothelial Cell

c) Neovascularization

d) Jelly Bump

(xlix) The focal length of a lens is

a) Inversely proportional to radius of the lens

b) Directly proportional to the power in diopter

c) Inversely proportional to power in diopter

d) Is not related to power to diopter

(l) The following are true about colour vision except:

a) deuteranomaly is more common than deuteranopia

b) blue pigment gene is found on chromosome X

c) red-green defect is common in acquired optic nerve disease

d) blue-yellow defect is common in glaucoma

(li) The following tests are used in testing the vision of pre-verbal children

except:

a) Log MAR
b) Catford drum
c) Sheridan-Gardiner tests
d) Cardiff card

(lii) Pinhole performs except:

a) improves ametropia of less than 6 D
b) if less than 1mm diameter, impairs the image quality
c) increases the depth of focus
d) increases the depth of field

(liii) Opthalmometer is also known as

a) Retinoscope
b) Keratometry
c) Ophthalmoscope
d) Lensometer

(liv) In indirect ophthalmoscopy, the field of view is affected by:

a) size of the patient's pupil
b) the refractive state of the observer
c) power of the condensing lens
d) None of these

(lv) The following is true about the keratometer:

a) in the Javal-Schiøtz instrument, the object size is fixed
b) in the Javal-Schiøtz instrument, each step of the mire is equivalent to 1/2 a dioptre
c) Wollaston prism is used in Javal-Schiøtz instrument
d) the power of the cornea is equal to 35 divided by the radius of curvature in mm

(lvi) The ___ retinoscope projects an oblong streaks into the patient's eye

a) Mahindra
b) Dynamic
c) Spot
d) Streak

(lvii) In retinoscopy at the neutrality, the pupil of the patient is suddenly filled with light and ____ motion is observed

a) With
b) Against

c) Scissor

d) No

(lviii) Regarding the autorefractors:

a) which are currently available on the market show large variation in accuracy

b) Scheiner double-pinhole principle are used in all modern autorefractors

c) modern autorefractors are useful in checking binocular muscle balance

d) accommodation and the size of the pupil can affect the accuracy

(lix) If the working distance is 50 cm, the total power found at neutrality must be adjusted by subtracting ____.

a) +2.00D

b) +1.50D

c) 1

d) -1.00D

(lx) Magnification of Direct Ophthalmoscopy is

a) 5X

b) 10X

c) 15X

d) 30X