



BRAINWARE UNIVERSITY

Term End Examination 2021 - 22
Programme – Bachelor of Optometry
Course Name – Ocular Physiology
Course Code - BOPTO202
(Semester II)

Time allotted : 1 Hrs.15 Min.

Full Marks : 60

[The figure in the margin indicates full marks.]

Group-A

(Multiple Choice Type Question)

1 x 60=60

Choose the correct alternative from the following :

- (1) Choroid is the layer of eye
 - a) Present in between Retina and Cornea
 - b) Present in between Sclera and Retina
 - c) Present in between Cornea and Sclera
 - d) None of the above
- (2) Optic nerve is formed by
 - a) Axons of the bipolar cells
 - b) Axons of the Horizontal cells
 - c) Axons of ganglionic cells
 - d) None of the above.
- (3) The meaning of Emmetropia is
 - a) Optically Normal eye
 - b) A condition of refractive error in eye
 - c) Problem related to long farsightedness.
 - d) Problem related to shortsightedness.
- (4) Which is the nutritional source of crystalline lens?
 - a) Chemical exchange from aqueous humor
 - b) Chemical exchange from vitreous humor
 - c) It gets nutrient from Cornea
 - d) All of these
- (5) The peak absorbance wavelength of the 'blue', 'green' and 'red' sensitive cones lie
 - a) At about 440, 505 and 570 nm respectively
 - b) At about 440, 535 and 565 nm respectively
 - c) At about 535, 440 and 565 nm respectively
 - d) At about 535 and 565 and 440 nm respectively
- (6) Visual field is measured by
 - a) Periscope
 - b) Retinometer
 - c) Perimeter
 - d) Retinoscope
- (7) The dorsal 'where' visual pathway passes through the _____ and the ventral 'what' pathway passes through the _____
 - a) Parietal lobes, temporal lobes
 - b) Hippocampus, amygdala
 - c) Superior colliculus, optic radiations
 - d) Prerectum, LGB
- (8) Parasympathetic nerves that stimulate constriction of the iris (in the pupillary reflex) are activated by neurons in
 - a) the lateral geniculate
 - b) the superior colliculus.
 - c) the inferior colliculus
 - d) the striate cortex.

- (9) The pigment layer of Retina stores large quantities of
- a) Calcium
 - b) granules
 - c) Vitamin A
 - d) None of these
- (10) Bipolar cell is located in between
- a) In between rod and cone cells
 - b) Amacrine and ganglion cells
 - c) Cone and ganglion cell
 - d) None of these
- (11) The fovea is the part of the retina that contains photoreceptors called
- a) Amacrine cells
 - b) Rod cells
 - c) Bipolar cells
 - d) Cone cells
- (12) The chemical present is in rods _____.
- a) All trans retinal
 - b) 11-cis retinal
 - c) Both of them
 - d) None of these
- (13) Cone cell is composed of
- a) 5 parts
 - b) 6 parts
 - c) 3 parts
 - d) 2 parts
- (14) Photoreceptors' of retina of eye, incorporated with;
- a) Cone
 - b) Rods
 - c) Melanocytes
 - d) Both a and b
- (15) With regard to the blood retina barrier:
- a) the outer blood retina is formed by the retinal pigment epithelium cells and their junctions
 - b) the basement membrane of the retinal capillaries is a major component of the inner blood retina barrier
 - c) the blood retina barrier is typically defective in the immediate peripapillary region
 - d) the retinal vascular endothelial cells can actively transport fluid and anions from the extracellular space of the retina into the circulation
- (16) True statements about ERG include:
- a) it is abnormal in patient with amblyopia
 - b) it can be performed on anaesthetized patients
 - c) it is affected by optic neuritis
 - d) the wave is produced by the photoreceptors
- (17) The tear film:
- a) contributes to the refractive function of the eye
 - b) is partly formed from the goblet cells
 - c) its normal break-up time is 5 to 15 seconds
 - d) is 100um thick
- (18) In ultra-filtration of aqueous formation, ciliary processes retain
- a) Protein
 - b) Electrolyte
 - c) Bi-carbonate
 - d) Sodium
- (19) Stereo acuity is called
- a) Hyper acuity
 - b) Identification acuity
 - c) Resolution acuity
 - d) Detection acuity
- (20) During accommodation
- a) the distance between the lens and the ciliary body is decreased
 - b) the tension in the suspensory ligament is increased
 - c) the tension of the lens capsule is increased
 - d) the refractive power of the lens is increased
- (21) Which of the followings is not a function of tear film?
- a) Forms an optical surface
 - b) serves as lubricant
 - c) keep surface of corneal and conjunctiva moist
 - d) transfer NO₂ from air to cornea
- (22) The intraocular pressure:
- a) gives a falsely higher reading in patients with thick cornea
 - b) shows a higher diurnal variation in glaucoma patients
 - c) is highest in the morning
 - d) is overestimated if measured with non-contact tonometer

- (23) Cone cells are responsible for
- Scotopic vision
 - Photopic vision and colour vision
 - Photopic vision
 - None of these
- (24) Which is not related to Transparency of the cornea?
- the endothelium integrity
 - integrity of epithelium
 - absence of blood vessels
 - absence of nerve fibres
- (25) Nerve supply of the iris:
- the iris receives only autonomic nerve supply
 - the long ciliary nerves are branches fo the naso-ciliary nerve of the ophthalmic division of the trigeminal nerve
 - the parasympathetic innervates the constrictor papillae
 - the short ciliary nerve arises from the ciliary ganglion and contain pre-ganglionic parasympathetic nerve fibres
- (26) The lacrimal gland:
- is a mucous gland
 - is supplied by parasympathetic fibres after rely in the pterygopalatine ganglion
 - the palpebral part is the preferred site for biopsy
 - is responsible for the most posterior layer of the tear film
- (27) Endothelial cells of cornea are
- cubical
 - columnar
 - hexagonal
 - none of these
- (28) Corneal transparency depends on _____.
- Regular arrangement of fibres
 - Hydration
 - Metabolic activity
 - All of them
- (29) Corneal transparency depends on _____
- Regular arrangement of fibres
 - Hydration
 - Metabolic activity
 - All of them
- (30) _____ responsible for Scotopic vision.
- Rods
 - Cones
 - Rhodopsin
 - None of them
- (31) _____ responsible for Photopic vision.
- Rods
 - Cones
 - Rhodopsin
 - None of them
- (32) Corneal epithelium is developed from
- Neuro-ectoderm
 - Surface-ectoderm
 - Mesoderm
 - Pars Optica retinae
- (33) Refractive index of aqueous humour is
- 1.336
 - 1.376
 - 1.116
 - 1.356
- (34) Ciliary body is supplied by
- Long posterior ciliary artery
 - Anterior ciliary artery
 - Both a & b
 - None of them
- (35) Lateral rectus muscle helps in
- Depression
 - Movement of Orbit
 - Abduction
 - Adduction
- (36) The diameter of fovea centralis, is
- 1.85 mm
 - 5.5 mm

- c) 3.00 mm
d) 1.50 mm
- (37) Clear vision depends on
a) Macula
b) Foveola
c) Parafovea
d) Perifovea
- (38) Lacrimal gland receives nerve supply from
a) Optic nerve
b) Frontal nerve
c) Nasocilliary nerve
d) None of these
- (39) Sixth cranial nerve supplies
a) Lateral Rectus Muscle
b) Superior Rectus Muscles
c) Medical Rectus Muscle
d) None of them
- (40) The part of trabecular meshwork towards canal of Schlemm's is
a) Uveal meshwork
b) Corneo-scleral meshwork
c) Juxtacanalicular meshwork
d) None of them
- (41) Color vision is the function of
a) Cones
b) Rods
c) Both a & b
d) None of them
- (42) Vergence is
a) Binocular movement
b) Uniocular movement
c) Both a & b
d) None of them
- (43) Optic nerve ends at
a) Optic Chisma
b) LGB
c) Visual Cortex
d) None of these
- (44) Manifest hypermetropia means
a) Latent + manifest
b) Latent + Absolute
c) Absolute + Facultative
d) None of them
- (45) Outer layers of retina is supplied by
a) Chorio-capillaries
b) Central retinal artery
c) Ciliary artery
d) None of them
- (46) Function of Epithelium of Cornea includes
a) Acts as major refractive surface of eye
b) Major surface to respond to wound healing
c) Prevent entrance of pathological organism into eye
d) All of these
- (47) Refractive index of Cornea is
a) 1.58
b) 1.37
c) 1.45
d) None of these
- (48) Thickness of Central Cornea is about
a) 0.52 mm
b) 0.45 mm
c) 0.67 mm
d) 1 mm
- (49) Endothelial cells are best evaluated by
a) Slitlamp Biomicroscopy
b) Gonioscopy
c) Specular Microscopy
d) All of these
- (50) Nerve supply of Sclera includes
a) Long Ciliary and Short Ciliary Nerves
b) Ophthalmic division of Occipital Nerve
c) Abducent Nerve
d) No presence of Nerve Supply
- (51) A wedge shaped structure which lies deep into Schlemm's canal is
a) Lamina Cribrosa
b) Scleral Spur
c) Scleral Sulcus
d) None of these
- (52) Iridodialysis is referred as

- a) Tearing of iris from Ciliary body
 c) Radial Streaks of Ciliary zone
- (53) Collarette can be found at
 a) Posterior surface of Descemet's membrane
 c) At Ciliary Process
- (54) Nerve supply of Sphincter Pupillae Muscle is
 a) Parasympathetic fibres of Oculomotor Nerve
 c) Sympathetic fibres of Oculomotor Nerve
- (55) The size of normal pupil is
 a) 2-4 mm
 c) 1-2 mm
- (56) Second order neuron in optic pathway are present in
 a) Retina
 c) Lateral geniculate body
- (57) The 'blind spot' is situated at
 a) fovea centralis
 c) 3 mm temporal to optic disc
- (58) Constriction of pupil occurs due to contraction of
 a) Muller's muscle
 c) sphincter pupillae
- (59) The nerve supplying orbicularis oculi muscle is
 a) trochlear
 c) nasociliary
- (60) The far point of myopic eye is
 a) in front of the eye
 c) at the infinity
- b) Iris stromal abnormality
 d) All of these
- b) At Iris Stroma
 d) Anterior Surface of Iris
- b) Parasympathetic fibres of Trigeminal Nerve
 d) Sympathetic fibres of Trigeminal Nerve
- b) 5-8 mm
 d) none of these
- b) Medial geniculate body
 d) Superior coliculus
- b) optic disc
 d) 3 mm nasal to optic disc.
- b) dilator papillae
 d) lateral rectus
- b) oculomotor
 d) facial
- b) behind the eye
 d) none of these