

**132/2024**

Maximum : 100 marks

Time : 1 hour and 30 minutes

1. The types of cells found in retina are :  
(A) Purkinje cells (B) Schwann cells  
(C) Neuroglial cells (D) Amacrine cells
2. The eye lens is :  
(A) Concave (B) Convex  
(C) Biconcave (D) Biconvex
3. Nasolacrimal duct open into :  
(A) Inferior meatus (B) Superior meatus  
(C) Middle meatus (D) Maxillary sinus
4. The junction between Cornea and Sclera is called :  
(A) Anterior Chamber (B) Limbus  
(C) Lens (D) None of the above
5. Which of the following has non-keratinised squamous epithelium with goblet cells?  
(A) Bony orbit (B) Optic Nerve  
(C) Eye lids (D) Conjunctiva
6. Which muscle is responsible for elevation of upper eye lid?  
(A) Medial Rectus (B) Levator Palpebrae Superioris  
(C) Superior Oblique (D) Superior Rectus
7. Which of the following structure is seen above the bony orbit?  
(A) Frontal sinus (B) Middle cranial fossa  
(C) Anterior cranial fossa (D) Maxillary sinus
8. The fluid between the retina and the lens is called :  
(A) Vitreous humour (B) Humus  
(C) Aques humour (D) Synovial fluid
9. Most common type of optic nerve injury :  
(A) Intra Cranial (B) Intra Orbital  
(C) Intra Canalicular (D) Intra Meatal
10. Snellen's chart is used to test :  
(A) Vision (B) Refraction  
(C) Colour blindness (D) Presbyopia

**A**

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**[P.T.O.]**

11. Egyptian ophthalmia is caused by :
- (A) Staphylococcus aureus (B) Moraxella lacunata  
(C) Haemophilus aegypticus (D) Pseudomonas aeruginosa
12. The leading infectious cause of blindness in developing countries is :
- (A) Trachoma (B) Ophthalmia neonatorum  
(C) Red eye (D) Angular conjunctivitis
13. Acute haemorrhagic conjunctivitis is caused by :
- (A) Enterovirus 70 (B) Adeno virus  
(C) Varicella Zoster virus (D) Cytomegalo virus
14. The most common ocular finding in Malaria is :
- (A) Conjunctivitis (B) Retinal Haemorrhage  
(C) Keratitis (D) Hordeolum
15. Unilateral painless chorioretinal granuloma is the most common finding of :
- (A) Ocular cysticercosis (B) Ocular Onchocerciasis  
(C) Ocular Trichinellosis (D) Ocular larva migrans
16. Mycotic keratitis is commonly caused by :
- (A) Penicillium (B) Fusarium  
(C) Candida (D) Aspergillus
17. Negative staining is used for demonstration of :
- (A) Flagella (B) Capsule  
(C) Fimbriae (D) Cellwall
18. Grams iodine acts as \_\_\_\_\_ in Grams staining.
- (A) Fixative (B) Cryo protectant  
(C) Mordant (D) Decolouriser
19. Chemical indicator for anaerobic condition in GasPak system is :
- (A) Reduced Methylene blue (B) Buffered Methylene blue  
(C) Polychrome Methylene Blue (D) None of the above
20. The three components of PCR involves all except :
- (A) DNA extraction (B) Amplification  
(C) Gel documentation (D) Blotting

21. Which of the following is the test for visual acuity (Distant vision)?  
(A) Snellen's chart (B) Jaeger's chart  
(C) Bjerrum screen (D) Confrontation test
22. Factors affecting visual acuity are except :  
(A) Stimulus factors (B) Retinal factors  
(C) Optical factors (D) Systemic factors
23. Which of the following denotes a person suffering from partial colour blindness?  
(A) Protanopes (B) Deuteranomaly  
(C) Deuteropes (D) Monochromats
24. Site of formation of Aqueous humour is :  
(A) Lens (B) Iris  
(C) Ciliary processes (D) Suspensory ligaments
25. Aqueous humour ultimately drains into episcleral veins through :  
(A) Conjunctiva (B) Canal of schlemm  
(C) Vitreous chamber (D) Sclera
26. Complete turn over of Aqueous humour takes place within :  
(A) 12 hours (B) One day  
(C) About one hour (D) 7 day
27. Abnormal I.O.P. (Intra Ocular Pressure) can be seen in all except :  
(A) Decreased absorption through the trabecular tissue  
(B) Ocular injury  
(C) Conjunctivitis  
(D) Obstruction to passage of aqueous humour through the pupil
28. The vertical and horizontal movements of the eyeball made from the mid position of gaze are called :  
(A) Conjugate movements (B) Cardinal movements  
(C) Vestibular movements (D) Saccades
29. Physical changes occur in these structures during accommodation except in :  
(A) Medial rectus muscle (B) Iris  
(C) Crystalline lens (D) Cornea
30. First and foremost advantage of binocular vision is :  
(A) Single vision  
(B) Stereopsis  
(C) Enlargement of field of vision  
(D) Compensation for blind spot and other differences

31. Which of the following drug is used topically (eye ointment) in *Herpes simplex* (type 1) keratitis?
- (A) Oseltamivir (B) Amantadine  
(C) Valacyclovir (D) Acyclovir
32. Which anti-tuberculosis drug among the following produces retrobulbar neuritis?
- (A) Streptomycin (B) Ethambutol  
(C) Rifampicin (D) Moxifloxacin
33. Betablocker not used topically for glaucoma :
- (A) Betaxolol (B) Carteolol  
(C) Celiprolol (D) Levobunolol
34. Glucocorticoid which is not usually given as intravitreal injection :
- (A) Prednisolone (B) Triamcinolone  
(C) Dexamethasone (D) Fluocinolone acetonide
35. One of the following not used topically for treatment of glaucoma :
- (A) Dorzolamide (B) Brinzolamide  
(C) Netarsudil (D) Acetazolamide
36. Which of the following group of ocular hypotensive drugs, does not reduce aqueous secretion?
- (A) Beta blockers (B) Dipivefrine  
(C) Brimonidine (D) Prostaglandins
37. Dipivefrine is a :
- (A) Prodrug of adrenaline (B) Beta blocker  
(C) Osmotic agent (D) Alpha blocker
38. Drug not useful in glaucoma is :
- (A) Dipivefrine (B) Brinzolamide  
(C) Echothiophate (D) Atropine
39. One of the following is not an advantage of topical betablocker over miotics in glaucoma :
- (A) No change in pupil size  
(B) Diminution of vision in dim light  
(C) No fluctuation in IOP  
(D) No induced myopia

40. Least cycloplegic mydriatic among the following is :
- (A) Atropine (B) Homatropine  
(C) Tropicamide (D) Phenylephrine
41. Each letter in Snellens chart subtends an angle of how many minutes at nodal point of eye :
- (A) 1 (B) 3  
(C) 5 (D) 10
42. The most appropriate reason for testing visual acuity from 6 metres is :
- (A) For convenience of person who is testing vision  
(B) At this distance the rays of light will have very little divergence that it may be taken as parallel  
(C) It is the usual length of the room used for testing vision  
(D) It is easy to detect all types of refractive error at this distance
43. Which of the following tests is preferred to determine visual acuity in pre school children?
- (A) Boek Candy Bead test (B) Double Maddox rod test  
(C) Titmus Fly test (D) Arden grating test
44. The following statements about near vision testing are correct except :
- (A) Near vision chart is kept at a distance of 25-35 cm  
(B) Tested in a room with dim light  
(C) Each eye should be tested separately  
(D) Jaegers chart is used to test near vision
45. Ishiharas colour vision test is used to detect which type of colour blindness :
- (A) Red green colour blindness (B) Blue yellow colour blindness  
(C) Both (A) and (B) (D) None of the above
46. Tumbling E chart used for testing visual acuity is preferred for :
- (A) Illiterate patients (B) Preschool children  
(C) Both (A) and (B) (D) None of the above
47. During retinoscopy at one metre if there is no movement of red reflex without any lens, it indicates that refractive status of the patient is :
- (A) Emmetropia (B) Myopia of 1D  
(C) Hypermetropia of 1D (D) None of the above

48. Which of the following statement is not true regarding retinoscopy?
- (A) Wet retinoscopy is the retinoscopy done with the use of cycloplegics
  - (B) Atropine is preferred for children less than 5 years
  - (C) In static retinoscopy patient fixates on an object at a close distance from both the eyes
  - (D) Retinoscopy is also known as skiascopy
49. During retinoscopy suppose one meridian is neutralized by +4D and meridian at right angles with +5D at a working distance of  $2/3^{\text{rd}}$  metre, then patient's refractive error would be :
- (A) +4D sphere
  - (B) +2.5D sphere and 5D cylinder
  - (C) +2.5D sphere and +1D cylinder
  - (D) +5D cylinder
50. Advantages of cycloplegic refraction are all except :
- (A) Accommodation is paralysed
  - (B) Pupil is dilated
  - (C) Macular refraction is obtained
  - (D) More amount of aberration through peripheral part of refractive media occurs
51. Prerequisite for retinoscopy are all except :
- (A) A trial set
  - (B) Dark room
  - (C) Distance vision chart
  - (D) Ophthalmoscope
52. Duochrome test which works on the principle of chromatic aberration is used to :
- (A) Refine cylindrical axis
  - (B) Refine cylindrical power
  - (C) Refine sphere
  - (D) Refine sphere and cylinder
53. In myopia, the parallel rays of light coming from infinity with accommodation at rest, are focused :
- (A) In front of the retina
  - (B) Behind the retina
  - (C) On the retina
  - (D) On the retina and behind the retina
54. Disadvantages of correcting aphakia using spectacles include all except :
- (A) Image magnification
  - (B) Roving ring scotoma
  - (C) Pin cushion effect
  - (D) Barrel distortion
55. Which of the following changes take place in the eye during accommodation?
- (A) Curvature of posterior surface of lens changes
  - (B) Anterior pole of lens moves backward
  - (C) Axial thickness of lens decreases
  - (D) Relaxation of lens zonules

56. Which of the following instrument is used to measure near point of accommodation?
- (A) Keratometer (B) RAF rule  
(C) Gonioscope (D) Ophthalmoscope
57. Which among the following about presbyopia is correct?
- (A) Presbyopia is a refractive error affecting older individuals  
(B) Presbyopia is corrected by concave lens  
(C) In presbyopia there is a decrease in accommodative power of crystalline lens  
(D) In presbyopia the intra ocular pressure increases
58. With regard to contact lens which among the following is false?
- (A) Base curve is the central anterior curve  
(B) Keratometry is performed to choose the base curve radius  
(C) Blink characteristics and tear film evaluation should be done before contact lens usage  
(D) Piggyback contact lens uses 2 lenses a soft contact lens and a rigid gas permeable contact lens
59. The following is true about Jacksons cross cylinder :
- (A) It is a combination of a sphere and a cylinder  
(B) It is used to check axis of cylinder before power  
(C) It is given as a treatment of astigmatism  
(D) It is used only in case of hypermetropic astigmatism
60. Which among the following is false regarding keratometry?
- (A) Keratometry is based on the fact that anterior surface of cornea act as a convex mirror  
(B) Bausch and Lomb keratometer is also known as one position keratometer as the power of cornea is measured in 2 meridia  
(C) Javal Schiotz keratometer is based on the principle of constant object size and variable image size  
(D) Keratometry measures the curvature of anterior surface of cornea in the central 3 mm

61. All of the following are true regarding tonometer except :
- (A) Schiottz tonometer is type of indentation tonometer
  - (B) Goldmann applanation tonometer works based on Imbert Fick law
  - (C) Schiottz tonometer start with 7.5 gm weight with additional weights to make it 10 gm and 15 gm
  - (D) Goldmann applanation tonometer require slit lamp with cobalt blue light
62. Which of the following tests is used for calculating intraocular lens power?
- (A) A Scan
  - (B) B Scan
  - (C) Ultrasound biomicroscopy
  - (D) OCT
63. Which of the following is a type of static perimetry?
- (A) Octopus
  - (B) Humphrey field Analyser
  - (C) Both (A) and (B)
  - (D) None of the above
64. All are true about Placido disc except :
- (A) Consists of equally spaced alternate black and white rings with a hole in the centre
  - (B) Closely placed mires indicate steepening of cornea in that axis
  - (C) Suitable for cornea with epithelial defects or stromal ulcers
  - (D) Small degrees of abnormalities of corneal shape is not easily detected
65. Regarding the calculation of intraocular lens power, which among the following is false?
- (A) It is more influenced by error in keratometry measurement than axial length
  - (B) Hoffer formula is better for short eyes
  - (C) IOL master calculates IOL power by non contact method
  - (D) A – constant of ACIOL is lower than PCIOL
66. After implantation of intra ocular lens, patient will have clear distance and near vision by which of the following methods :
- (A) Implantation of Multifocal IOL
  - (B) Use of Accommodative IOL
  - (C) Implantation of monovision IOL to make the eye emmetropic and use reading glasses for near vision
  - (D) All of the above
67. After simple transposition of + 2.00 DS/ – 050 DC 60° the answer obtained is :
- (A) + 1.50 DS/ + 050 DC 150°
  - (B) + 2.50 DS/ + 050 DC 150°
  - (C) + 1.50 DS/ – 050 DC 60°
  - (D) – 2.50 DS/ – 050 DC 60°



68. All regarding bifocal glasses are correct except :
- (A) Franklin introduced split glass with 2 separate segments held together in a frame
  - (B) Fused bifocals involved combining 2 lens with same refractive index
  - (C) Solid bifocals are made in one piece of glass with 2 distinct curves being ground on one spherical surface
  - (D) Cemented bifocals are made by sticking the near segment of anterior surface of distance correction
69. Which of the following is true about cylindrical lenses?
- (A) Its power is 90 degree to the axis of the lens
  - (B) Lens form a focal line parallel to its axis
  - (C) It has one plane surface and other curved surface
  - (D) All of the above
70. Regarding astigmatism all are true except :
- (A) In with the rule astigmatism vertical axis is more curved than horizontal axis
  - (B) In simple myopic astigmatism the rays are focused on the retina in one meridian and in front of the retina in other meridian
  - (C) It is corrected by convex spherical lens
  - (D) In oblique astigmatism the two principal meridians are not horizontal and vertical
71. The physiological optical defects in human eye includes all except :
- (A) Chromatic aberration
  - (B) Prismatic aberration
  - (C) Diffraction
  - (D) Spherical aberration
72. In Ophthalmology, Prisms are used in :
- (A) Evaluation of strabismus
  - (B) Ophthalmic instruments
  - (C) Low vision aids
  - (D) All of the above
73. Optical condition in which refraction of the two eyes differs in variety and degree is named as :
- (A) Aniseikonia
  - (B) Anisometropia
  - (C) Anisocoria
  - (D) Ametropia
74. Convex lens is used in the treatment of all except :
- (A) Keratoconus
  - (B) Aphakia
  - (C) Presbyopia
  - (D) Residual hypermetropia

75. Astigmatism is a type of :
- (A) Axial ametropia (B) Curvature ametropia  
(C) Index ametropia (D) Positional ametropia
76. Incident parallel rays come to focus posterior to the light sensitive layer of retina in all except :
- (A) Hypermetropia (B) Myopia  
(C) Aphakia (D) Presbyopia
77. Sturm's conoid represents refraction through a :
- (A) Convex surface (B) Concave surface  
(C) Toric surface (D) None of the above
78. Misdirected eyelashes are termed as :
- (A) Distichiasis (B) Madarosis  
(C) Poliosis (D) Trichiasis
79. The test for measuring the tear secretion is :
- (A) ROPLAS test (B) Syringing test  
(C) Schirmer test (D) Jones dye test
80. Bitot's spot is seen in :
- (A) Vitamin C deficiency (B) Vitamin A deficiency  
(C) Vitamin B12 deficiency (D) Vitamin K deficiency
81. Corneal trauma with vegetative matter often leads to :
- (A) Bacterial corneal ulcer (B) Fungal corneal ulcer  
(C) Viral corneal ulcer (D) Acanthamoeba corneal ulcer
82. The feature of iridocyclitis include all except :
- (A) Hypopyon (B) Keratic precipitates  
(C) Complicated cataract (D) Hyphema
83. Features of hypermature cataract includes :
- (A) Milky white cataract  
(B) Brown nucleus sinking down  
(C) Elastic capsule with calcification  
(D) All of the above

84. In a patient with total cataract, retina is evaluated by :
- (A) Ultrasound (B) Direct ophthalmoscopy  
(C) Indirect ophthalmoscopy (D) Slit lamp biomicroscopy
85. Which of the following statements about glaucoma is incorrect?
- (A) Glaucoma is defined as a group of ocular diseases characterized by progressive optic neuropathy with associated visual function loss  
(B) It is the second most common cause of irreversible blindness in the world  
(C) It is always associated with raised intraocular pressure  
(D) With appropriate screening, it can be identified early
86. Investigations needed to diagnose glaucoma include :
- (A) Tonometry (B) Perimetry  
(C) Gonioscopy (D) All of the above
87. IOP measurement using rapid air pulse to flatten the cornea is done by :
- (A) Non contact tonometry (B) Applanation tonometry  
(C) Schiottz tonometry (D) None of the above
88. The gold standard method of visual field assessment in a case of glaucoma is :
- (A) Bjerrums perimeter method  
(B) Confrontation method  
(C) Humphrey field analyser method  
(D) Listers perimeter method
89. Typical field defects in primary open angle glaucoma include all except :
- (A) Altitudinal field defect (B) Arcuate field defect  
(C) Seidels scotoma (D) Tubular field defect
90. The type of glaucoma considered as “silent thief of sight” is :
- (A) Congenital glaucoma (B) Primary narrow angle glaucoma  
(C) Primary open angle glaucoma (D) Neovascular glaucoma
91. Treatment of glaucoma includes :
- (A) Topical drops (B) Trabeculectomy  
(C) Laser treatment (D) All of the above

92. In a case of eye donation cornea is collected within \_\_\_\_\_ hours of death.
- (A) 4 (B) 6  
(C) 8 (D) 10
93. Optical aids used in rehabilitation of low vision patients include all except :
- (A) White cane (B) Magnifiers  
(C) Prisms (D) Telescopes
94. Nowadays, Ophthalmic instruments are sterilized by all except :
- (A) Autoclave (B) ETO sterilization  
(C) Plasma sterilization (D) Hot air oven
95. The initial step in binocular single vision is :
- (A) Fusion (B) Stereopsis  
(C) Simultaneous perception (D) Vergence
96. The refractive error associated with esotropia is :
- (A) Hypermetropia (B) Myopia  
(C) Astigmatism (D) None of the above
97. Causes for amblyopia includes all except :
- (A) Sensory deprivation (B) Myopia  
(C) Anisometropia (D) Strabismus
98. Deviation of one eye inferiorly is termed as :
- (A) Exotropia (B) Esotropia  
(C) Hypotropia (D) Hypertropia
99. Retained iron foreign body causes :
- (A) Siderosis (B) Chalcosis  
(C) Argyrosis (D) None of the above
100. Target diseases identified for VISION 2020 in India includes all except :
- (A) Onchocerciasis (B) Trachoma  
(C) Corneal blindness (D) Diabetic retinopathy

**SPACE FOR ROUGH WORK**

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