EXERCISE-I (Conceptual Questions) **Build Up Your Understanding**

EYE

1. Aperture of an eye can be changed by:-
(1) Aquous humor (2) Vitreous humor
(3) Ciliary muscles (4) Iris

2. Which is responsible for colour detection ?
(1) Cones (2) Rodls (3) Rods and cones (4) Choroid

3. Pigmented layer in eye is called :-
(1) Cornea (2) Sclerotic (3) Retina (4) All

4. Rhodopsin is a constituent of :-
(1) Cornea (2) Choroid (3) Rods (4) Cones

5. If the source of bright light in front of eye suddenly become bright :-
(1) Pupil contract (2) Focus of lens changes
(3) Vitreous humor becomes liquid like (4) Retina blood supply is cut-off

6. Retina of the vertebrates eye consists of :-
(1) Neurons and neuroglia (2) Rods, cones, neurons and neuroglia
(3) Rods, cones and neuroglia (4) Rods and cones

7. The focal length of the lens in eye is controlled by
(1) Vitreous humor (2) Ciliary muscles
(3) Iris muscles (4) Pupil

8. Night blindness is caused due to :-
(1) Hypermatropia (2) Myopia
(3) Defective cornea (4) Deficiency of rhodopsin in rods

9. During night when the intensity of light is low, it is detected by :-
(1) Rods (2) Cones (3) Both (4) Crystalline lens

10. To correct myopia vision one should use :-
(1) Convex lens (2) Concave lens (3) Plane lens (4) None

11. Where is the cavity of vitreous humor found ?
(1) Between sclerotic and choroid (2) Infront of lens
(3) Behind lens (4) Between choroid and retina

12. Function of iris is to :-
(1) Alter diameter of pupil (2) Close eye lids
(3) Secrete aqueous humor (4) Move the lens

13. The pigment found in rods is :-
(1) Rhodopsin (2) Melanine (3) Photosin (4) Keratin

14. Which pigment helps some nocturnal animal to see at night?
(1) Haemoglobin (2) Porphyrin (3) Guanine (4) Heparin

15. Eye is most sensitive to :-
(1) 20 Å (2) 1000 Å (3) 5000 Å (4) 7000 Å

16. Area of most active vision in eye where sharp image is formed is called :-
(1) Blind spot (2) Yellow spot (3) Lens (4) Pupil

17. Blind spot in the eye is located :-
(1) In the center of pupil
(2) In the center of lens
(3) In fovea centralis
(4) Where optic nerves leaves retina

18. Lens and retina of vertebrate eye develop from :-
(1) Mesoderm
(2) Ectoderm
(3) Endoderm
(4) Partly from ectoderm and partly from endoderm

19. The common defect of eye which develops in old age is:-
(1) Glaucoma (2) Astigmatism (3) Presbyopia (4) Myopia

20. Ciliary muscles are found in :-
(1) Junction of choroid and iris in eye ball
(2) Inside larynx toregulate tension in eye ball
(3) Between ribs to assist in breathing movement
(4) At base of cilia in ciliated epithelium

21. The aperture controlling the light entering in eye is called:-
(1) Iris (2) Pupil (3) Blind spot (4) Sclerotic layer

22. Myopia is a defect in human eyes in which the image is formed:-
(1) Behind retina and can be corrected by using convex lens.
(2) Behind retina and can be corrected by using concave lens.
(3) Infront of retina and can be corrected by using concave lens.
(4) Infront of retina and can be corrected by using convex lens.

23. All bones provide support and protection to body parts which bone is different in it's function:-
(1) Ribs (2) Atlas vertebra (3) Malleus (4) Radius

24. Convex lens is used to correct:-
(1) Hypermatropia (2) Myopia (3) Cataract (4) Glaucoma

25. Owls moves freely during night since they have :
(1) Adjustable pupil
(2) Only cones in retina
(3) Only rods in retina
(4) Vitamin a deficiency

26. Which one of the following diseases in man belongs to the same category as haemophilia ?
(1) Hypermatropia (2) Rabies

(3) Night blindness (4) Colour blindness

27. Transmission of light into nerve impulse is a :-
(1) Mechanical process (2) Physical process
(3) Chemical process (4) Biochemical process

28. Colour blindness in human being is due to:
(1) Vitamin A deficiency (2) Sex linked inheritance
(3) Over activity of adrenal gland (4) Excessive drinking of alcohol

29. How many oblique and rectus muscles are found to move the eye ball in various direction inside the eye orbit?
(1) Two (2) Four (3) Six (4) Eight

30. A small region on the retina of the eye which contains only cones is called :-
(1) Area centralis (2) Fovea centralis
(3) Blind spot (4) Ora serrata

31. In man, nictitating membrane is :-
(1) Absent (2) Vestigeal (3) Non-functional (4) Functional

32. For the synthesis of rhodopsin, which of the following food is needed ?
(1) Mango (2) Rice (3) Carrot (4) Tomatoes

33. No image formation occurs on blind-spot of retina because:-
(1) It is not present of the optical axis of the eye
(2) Here cones and rods are absent
(3) On this part only cones are present
(4) The nerve fibres of this region do not contribute in the formation of optic chiasma

34. "Telescopic vision" found in :-
(1) Amphibians (2) Mammals
(3) Birds (4) None of these

35. Binocular vision found in :-
(1) Man (2) Monkey (3) Apes (4) All the above

36. Highly vascular and pigmented layer of human eyes is:-
(1) Retina (2) Sclerotic (3) Choroid (4) None of these

37. The part of human eye which acts like diaphragm of camera is :-
(1) Pupil (2) Iris (3) Lens (4) Cornea

38. Which of the following medicine is used to dilate pupil is?
(1) Atropine (2) Cocain (3) Belladona (4) All of the above

39. A circular canal which found in limbus part of eyes is called :-
(1) Hyaloid canal (2) Canal of Schlemm
(3) Canal of Croquet (4) Eustachian tube

40. Three layers in eye ball from inside to out side are-
(1) Retina, choroid, sclerotic (2) Choroid, retina, sclerotic
(3) Sclerotic, choroid, retina (4) Sclerotic, retina, choroid

41. In eyes the image which is formed on the retina is-
(1) Erect and real (2) Erect and virtual
(3) Inverted and real (4) Inverted and virtual

42. Aqueous humor and vitreous humor are secreted by:-
(1) Iris (2) Ciliary body (3) Lens (4) Cornea

43. Pecten, a comb like structure is found in the eye of
(1) Amphibians (2) Reptiles
(3) Birds (4) Mammals

44. Aqueous humour & vitreous humour are separated by:-
(1) Cornea (2) Conjunctiva (3) Lens (4) All

45. In Glaucoma:-
(1) Eye ball elongates (2) Eye ball shortened
(3) Fluid pressure increase in eye (4) Cornea become opaque

46. Space between cornea & lens is :-
(1) Aqueous chamber (2) Vitreous chamber
(3) Fovea centralis (4) Canal of schlemm

47. Colour blindness is due to :-
(1) Deficiency of Vitamin A (2) Deficiency of Vitamin D
(3) Deficiency of Vitamin E (4) None of these

48. Cavity of aqueous humour is :-
(1) Behind the lens (2) lnfront of lens
(3) Between choroid and sclerotic (4) None of these

49. Trachoma disease is due to infection of bacteria:-
(1) Chlamydia trachomatis (2) Bassilus
(3) E. Coli (4) Salmonella

50. The eye defect, Astigmatism can be corrected by using:-
(1) Convex lens (2) Concave lens (3) Cylindrical lens (4) Surgery

51. Mucoprotein which found in vitreous humour is :-
(1) Albumin (2) Vitrin (3) Globulin (4) Lysozyme

52. Conjunctiva of eye is derived from:-
(1) Epidermis (2) Dermis (3) Mesoderm (4) Endoderm

53. " Miosis" in eye refers to :-

(1) Reduction in diameter of pupil (2) Increased diameter of pupil
(3) Reduction division in retina (4) Shrinkage of eye ball

54. What is the cause of sterioscopic vision in human?
(1) Refraction power of eye is high (2) Well developed retina
(3) Highly developed cerebral cortex (4) Presence of biconvex lens

55. Astigmatism is developed when –
(1) Lens become opaque (2) Curvature of conjunctiva is changed
(3) Lens become nonflexible (4) Curvature of cornea is changed

56. What conditions are developed after deficiency of vitamin A-
(1) Night blindness (2) Keratinization of cornea
(3) Keratinization of conjunctiva (4) All the above

57. Function of vitreous humor is -
(1) Nutrition to lens (2) Maintain intraocular pressure
(3) Reflection (4) All the above

58. Which of the following structure of eye is artificially implanted?
(1) Cornea (2) Lens
(3) Retina (4) Cornea & lens both

59. When the human comes in bright light then what will happen ?
(1) Synthesis of rhodopsin (2) Mydriasis
(3) Miosis (4) None of the above

60. Which structure of eye is related to focussing of eye?
(1) Lens (2) Cornea
(3) Retina (4) Aqueous and vitreous humor

61. Which statement is wrong about conjunctiva ?
(1) Ectodermal origin (2) Presents on the central part of cornea
(3) Vascular (4) Covers the anterior part of sclera

62. When the canal of schlemm is blocked then what condition is developed ?
(1) Intraocular pressure is increased (2) Retina start damage
(3) Person may become blind (4) All the above

63. Which one of the following is the correct difference between Rod Celis and Cone Cells of our retina?

		Rod Cells	**Cone Cells**
(1)	Overall function	Vision in poor light	Colour vision and detailed vision in bright
(2)	Distribution	More concentrated in centre of retina	Evenly distributed all over retina
(3)	Visual acuity	High	Low
(4)	Visual pigment	Iodopsin	Rhodopsin

	contained		

64. Cornea transplant in humans is almost never rejected. This is because:-
(1) It is composed of enucleated cells
(2) It is a non-living layer
(3) Its cells are least penetrable by bacteria
(4) It has no blood supply

65. Maximum refraction of light takes place at:
(1) cornea (2) lens (3) iris (4) aqueous humour

66. Vitreous humor contains :
(1) mucoprotein (2) water
(3) mucoid connective tissue (4) all of the above

67. Only rods are present in the eyes of one of the following animals
(1) Pigeon (2) Squirrel (3) Fowl (4) Owl

EAR

68. Organ of cortisis found in:-
(1) Kidneys (2) Heart (3) Nasal chamber (4) Internal ear

69. The fluid found in semicircular annals internal ear of rennin is **:-**
(1) Perilymph (2) Endolyhl (3) Haemolymph (4) Lymph

70. Chief function of semicircular canals of internal ear-
(1) Balancing and hearing
(2) to perceive sound wibrations of high frequency
(3) To maintain dynamic equilibrium of the body while the body is inbalance
(4) To transmit sound vibration to the auditory

71. In Mammals organ Cochlear corit occurs in :-
(1) Main canal (2) Ear canal (3) Cochlear canal (4) Tympanum

72. "Organ of corti" is connected with the sense of :-
(1) Smell (2) Hearing
(3) Taste (4) Equilibrium

73. Which structure helps a person to maintain equilibrium ?
(1) Cochlea (2) Eustachian tube
(3) Semicircular canals (4) Hammer like bone

74. Cochlea of mammalian ear is concerned with :-
(1) Balancing of body (2) Hearing
(3) Pereception of atmospheric pressure (4) Both (1) and (2)

75. All bones provide support and protection to body parts. Which bone is different in it's function?
(1) Ribs (2) Atlas vertebra
(3) Malleus (4) Radius

76. External ear are characteristic of:-
(1) Mammals (3) Amphibians
(2) Reptiles (4) Fishes

77. Our ear can hear sound waves of the frequency :
1) Above 20,000 cycles/sec. (2) 5-100 cycles/ sec.
(3) 50-20,000 cycles/sec. (4) 20-20,000 cycles/sec.

78. The fluid surrounding the membranous labyrinth of human is called :-
(1) Perilymph (2) Endolymph
(3) Haemolymph (4) Cerebrospinal fluid

79. Cochlea contains:
(1) Scala vestibule (2) Scala tympani
(3) Scala media (4) All the above

80. By the stimulation of which structure of human ear, the soimd waves are perceived by brain :-
(1) Basilar membrane (2) Tectorial membrane
(3) Meissner's membrane (4) Sensory hair cells of organ of corti

81. Which of the following is not an ear ossicle?
(1) Incus (2) Malleus (3) Humerus (4) Stapes

82. Cochlea arises from :
(1) Utriculus (3) Middle ear
(2) Sacculus (4) Semicircular canals

83. The other name of internal ear is :
(1) Utriculus (2) Membranous labyrinth
(3) Sacculus (4) Ductus endolymphaticus

84. External auditory meatus contains the following gland:-
(1) Ceruminous gland (2) Lachrymal gland
(3) Harderian gland (4) Meibomian gland

85. Which of the following statement is correct regarding "Structure of ear" ?
(1) The ear ossicles increase the efficiency of transmission of sound wave.
(2) Malleus is attached with oval window.
(3) Eustachian tube connects middle ear cavity with larynx.
(4) Middle ear contain three ear ossicles called malleus, incus and sphenoid.

86. Otolith (otoconia) are $CaCO_3$ particles found in:-
(1) Perilymph (2) Endolymph (3) Bones (4) Vitreous humor

87. Which of the following is anvil shaped ear ossicle ?
(1) Incus (2) Malleus (3) Stapes (4) Humerus

88. Which of the following is stirrup shaped ear ossicle?
(1) Incus (2) Stapes (3) Malleus (4) Humerus

89. Fenestra ovalis is the opening of:-
(1) Cranium (2) Tympanum (3) Tympanic cavity (4) Brain

90. In man the muscles which move the pinnae are :-
(1) Absent (2) Vestigeal (3) Functional more (4) Functional

91. The ear ossicles of man lie in the:
(1) Auditory capsules (2) External auditory meatus
(3) Tympanic cavity (4) Tympanic bulla

92. The middle ear and internal ear of mammals are enclosed in which of the following bones ?
(1) Mastoid
(2) Ethmoid
(3) Tympanic bulla
(4) Tympanic bulla and periotic bone (temporal bone)

93. The scala vestibuli communicates with scala tympani through narrow canal called :-
(1) Ductus endolymphaticus (2) Helicotrema
(3) Ductus utriculi (4) Sacculo utricular canal

94. Between malleus & incus is found :
(1) Synovial hinge joint (2) Synovial ball socket joint
(3) Pivot joint (4) Glinding joint

95. Eye and ear are the example of :-
(1) Teleoreceptor (2) Gustato receptor
(3) Extero receptor (4) Intero receptor

96. The tympanic cavity is :-
(1) Columella auris (2) Middle ear
(3) Eustachian tube (4) Internal ear

97. One of the following is correct :
(1) Semicircular canal-balancing (2) Cochlea - hearing
(3) Utriculus -& sacculus - balancing (4) All of the above

98. In the tympanic cavity there is an aperture in which the stapes is fitted it is :-
(1) Foramen rotundus (2) Foramen triosseum
(3) Fenestra ovalis (4) Fenestra rotandus

99. Cochlea is mainly responsible for :
(1) Balance only (2) Hearing only
(3) Both balancing and hearing (4) Perception of colour

100. The bone which is in contact with fenestra ovalis is:-
(1) Malleus (2) Incus (3) Stapes (4) None

101. Ear ossicle from inner side of middle ear are:
(1) Malleus, Incus, stapes (2) Stapes, Incus, Malleus
(3) Incus stapes & malleus (4) Malleus, stapes, incus

102. Endolymph contains white crystals of $CaCO_3$ called:-
(1) Otoconia (2) Otolith (3) Ear dust (4) All of the above

103. Which of the following is part of middle ear?
(1) Cochlea (2) Utriculus
(3) Sacculus (4) Malleus

104. "Tensor tympani" & "Stapedius muscles" are found in:-
(1) External ear (2) Middle ear
(3) Internal ear (4) Exterrial auditory meatus

105. The organ of corti is a modification of:-
(1) Tectorial membrane (2) Reissner's membrane
(3) Basilar membrane (4) Meissner's membrane

106. Function of eustachian tube is to:
(1) Provide air to the ear ossicles
(2) Remove dirt from the middle ear
(3) Keep middle ear in proper shape
(4) To maintain proper air pressure in middle earand internal em for protecting them from damage by loud sound

107. The damage to ear by sudden explosion (loud sound) is prevented by :-
(1) Eustachian tube (2) Tensor tympani muscles
(3) Stapedius muscles (4) All of the above

108. The structure in the internal ear which resembles "snail shell" is called ;-
(1) Organ of corti (2) Membranous labirynth
(3) Cochlea (4) Ear ossicles

109. The sound vibration are finally exhausted in:
(1) Organ of corti (2) Fenestra rotundus
(3) Fenestra ovalis (4) Tympanic membrane

110. Which of the following structure is not related to body balance ?
(1) Maculae (2) Crista (3) Organ of corti (4) Ampulla

111. Scala media is present in -
(1) Part of middle ear (2) Cochlear canal
(3) Chamber of semicircular canal (4) Chamber which is related to perilymph

112. Ear dust is not situated in endolymph of -
(1) Utriculus (2) Ampulla
(3) Sacculus (4) Endolymphatic sac

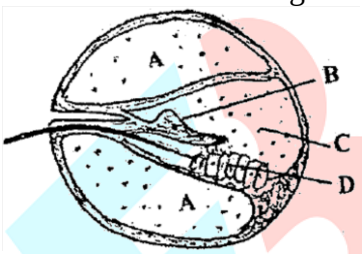
113. Body balance during dynamic condition is initiated by which structure -
(1) Otoconia (2) Cupula
(3) Stereocilia of crista (4) Kinocillium of maculae

114. Eustachian tube is related with -
(1) External ear (2) Middle ear (3) Internal ear (4) Auditory canal

115. Fluid present in the organ of corti is
(1) Endolymph (2) Perilymph (3) Cortilymph (4) Plasma

116. Which of the following muscles are related with middle ear?
(1) Tensor tympani (2) Stapedius
(3) Both (1) and (2) (4) Extrinsic and intrinsic muscles

117. Given below is a diagrammatic cross section of a single loop of human cochlea :-



Which one of the following options correctly represents the names of three different parts ?
(1) D : Sensory hair cells, A : Endolymph B: Tectorial membrane
(2) A: Perilymph, B : Tectorial membrane C : Endolymph
(3) B : Tectorial membrane, C : Perilymph, D : Secretory cells
(4) C : Endolymph, D : Sensory hair cells, A : Serum

118. Passage connecting middle ear with pharynx is called:-
(1) Cochlear canal (2) Vestibular canal
(3) Tympanic canal (4) Eustachian canal

ANSWER KEY

EXERCISE-I (Conceptual Question)

1.	(4)	**2.**	(1)	**3.**	(3)	**4.**	(3)	**5.**	(1)	**6.**	(2)	**7.**	(2)
8.	(4)	**9.**	(1)	**10.**	(2)	**11.**	(3)	**12.**	(1)	**13.**	(1)	**14.**	(3)
15.	(3)	**16.**	(2)	**17.**	(4)	**18.**	(2)	**19.**	(3)	**20.**	(1)	**21.**	(2)
22.	(3)	**23.**	(3)	**24.**	(1)	**25.**	(3)	**26.**	(4)	**27.**	(4)	**28.**	(2)
29.	(3)	**30.**	(2)	**31.**	(2)	**32.**	(3)	**33.**	(2)	**34.**	(3)	**35.**	(4)
36.	(3)	**37.**	(2)	**38.**	(4)	**39.**	(2)	**40.**	(1)	**41.**	(3)	**42.**	(2)
43.	(3)	**44.**	(3)	**45.**	(3)	**46.**	(1)	**47.**	(4)	**48.**	(2)	**49.**	(1)
50.	(3)	**51.**	(2)	**52.**	(1)	**53.**	(1)	**54.**	(3)	**55.**	(4)	**56.**	(4)
57.	(2)	**58.**	(2)	**59.**	(3)	**60.**	(1)	**61.**	(2)	**62.**	(4)	**63.**	(1)
64.	(4)	**65.**	(1)	**66.**	(4)	**67.**	(4)	**68.**	(4)	**69.**	(2)	**70.**	(3)
71.	(3)	**72.**	(2)	**73.**	(3)	**74.**	(2)	**75.**	(3)	**76.**	(1)	**77.**	(4)

78.	(1)	**79.**	(4)	**80.**	(4)	**81.**	(3)	**82.**	(2)	**83.**	(2)	**84.**	(1)
85.	(1)	**86.**	(2)	**87.**	(1)	**88.**	(2)	**89.**	(3)	**90.**	(2)	**91.**	(3)
92.	(4)	**93.**	(2)	**94.**	(1)	**95.**	(1)	**96.**	(2)	**97.**	(4)	**98.**	(3)
99.	(2)	**100.**	(3)	**101.**	(2)	**102.**	(4)	**103.**	(4)	**104.**	(2)	**105.**	(3)
106.	(4)	**107.**	(1)	**108.**	(3)	**109.**	(2)	**110.**	(3)	**111.**	(2)	**112.**	(2)
113.	(2)	**114.**	(2)	**115.**	(3)	**116.**	(3)	**117.**	(2)	**118.**	(4)		