ALLEN CAREER INSTITUTE KOTA (RAJASTHAN)

path to success

PRE-MEDICAL

ZOOLOGY

ENTHUSIAST | LEADER | ACHIEVER

EXERCISE

Sensory Organs

ENGLISH MEDIUM

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

SO0001

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

SO0002

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

SO0003

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

SO0004

5. If the source of 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

SO0005

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

SO0006

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

SO0007

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

SO0008

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

SO0009

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

SO0011

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

SO0012

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

SO0013

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

SO0015

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

SO0016

15. 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

SO0017

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

SO0018

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

SO0020

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

SO0021

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

SO0027

20. 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

SO0030

21. In man, nictitating membrane is :-
(1) Absent
(2) Vestigeal
(3) Highly developed
(4) Functional

SO0031

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

SO0032

23. 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

SO0033

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

SO0034

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

SO0036

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

SO0037

27. Which of the following medicine is used to dilate pupil?
(1) Atropine (2) Cocain
(3) Belladona (4) All of the above
SO0038

28. A circular canal which found in limbus part of eyes is called :-
(1) Haversian canal
(2) Canal of Schlemm
(3) Cochlear canal
(4) Eustachian tube
SO0039

29. 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
SO0040

30. 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
SO0041

31. Aqueous humor and vitreous humor are secreted by:-
(1) Iris (2) Ciliary body
(3) Lens (4) Cornea
SO0042

32. Aqueous humour & vitreous humour are separated by :-
(1) Cornea (2) Conjunctiva
(3) Lens (4) All
SO0044

33. Space between cornea & lens is :-
(1) Aqueous chamber
(2) Vitreous chamber
(3) Fovea centralis
(4) Canal of schlemm
SO0046

34. Cavity of aqueous humour is :-
(1) Behind the lens
(2) In front of lens
(3) Between choroid and sclerotic
(4) None of these
SO0048

35. Mucoprotein which found in vitreous humour is :-
(1) Albumin (2) Vitrin
(3) Globulin (4) Lysozyme
SO0051

36. Conjunctiva of eye is derived from :-
(1) Epidermis (2) Dermis
(3) Mesoderm (4) Endoderm
SO0052

37. " 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
SO0053

38. 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
SO0054

39. When we look at nearby object then :-
(1) Suspensory ligaments are stretched
(2) Ciliary muscles are contracted
(3) Suspensory ligaments are loose
(4) Both (2) and (3)
SO0185

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

SO0057

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

SO0058

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

SO0060

43. 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

SO0061

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

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

SO0063

45. 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

SO0064

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

SO0065

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

SO0066

48. Which of the following structure present at junction of iris and choroid in eye ball.
(1) Limbus (2) Lens
(3) Cornea (4) Ciliary body

SO0186

EAR

49. Organ of Corti is found in :-
(1) Kidneys (2) Heart
(3) Nasal chamber (4) Internal ear

SO0068

50. Chief function of semi-circular canals of internal ear –
(1) Balancing and hearing
(2) To perceive sound vibrations of high frequency
(3) To maintain dynamic equilibrium of the body while the body is in balance
(4) To transmit sound vibration to the auditory nerve

SO0070

51. In mammals organ of Corti occurs in :-
(1) Main canal (2) Ear canal
(3) Cochlear canal (4) Tympanum
SO0071

52. "Organ of Corti" is concerned with the sense of :-
(1) Smell (2) Hearing
(3) Taste (4) Equilibrium
SO0072

53. Which structure helps a person to maintain equilibrium ?
(1) Cochlea
(2) Eustachian tube
(3) Semi-circular canals
(4) Hammer like bone
SO0073

54. Cochlea of mammalian ear is concerned with :-
(1) Balancing of body
(2) Hearing
(3) Perception of atmospheric pressure
(4) Both (1) and (2)
SO0074

55. 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
SO0075

56. External ear are characteristic of :-
(1) Mammals (2) Reptiles
(3) Amphibians (4) Fishes
SO0076

57. 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.
SO0077

58. The fluid surrounding the membranous labyrinth of human is called :-
(1) Perilymph
(2) Endolymph
(3) Haemolymph
(4) Cerebrospinal fluid
SO0078

59. Cochlea contains :-
(1) Scala vestibule
(2) Scala tympani
(3) Scala media
(4) All the above
SO0079

60. By the stimulation of which structure of human ear, the sound waves are perceived by brain :-
(1) Basilar membrane
(2) Tectorial membrane
(3) Meissner's membrane
(4) Sensory hair cells of organ of corti
SO0080

61. Which of the following is not an ear ossicle?
(1) Incus (2) Malleus
(3) Humerus (4) Stapes
SO0081

62. Cochlea arises from :-
(1) Utriculus
(2) Sacculus
(3) Middle ear
(4) Semicircular canals
SO0082

63. The other name of internal ear is :-
(1) Utriculus
(2) Membranous labyrinth
(3) Sacculus
(4) Ductus endolymphaticus
SO0083

64. External auditory meatus contains the following gland :-

(1) Ceruminous gland

(2) Lachrymal gland

(3) Harderian gland

(4) Meibomian gland

SO0084

65. 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.

SO0085

66. Otolith (otoconia) are $CaCO_3$ particles found in :-

(1) Perilymph

(2) Endolymph

(3) Bones

(4) Vitreous humor

SO0086

67. Which of the following is anvil shaped ear ossicle?

(1) Incus (2) Malleus

(3) Stapes (4) Humerus

SO0087

68. Which of the following is stirrup shaped ear ossicle?

(1) Incus (2) Stapes

(3) Malleus (4) Humerus

SO0088

69. Fenestra ovalis is the opening of :-

(1) Cranium

(2) Tympanum

(3) Tympanic cavity

(4) Brain

SO0089

70. In man the muscles which move the pinnae are :-

(1) Absent

(2) Vestigeal

(3) Functional more

(4) Functional

SO0090

71. The ear ossicles of man lie in the :-

(1) Auditory capsules

(2) External auditory meatus

(3) Tympanic cavity

(4) Tympanic bulla

SO0091

72. 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)

SO0092

73. The scala vestibuli communicates with scala tympani through narrow canal called:-

(1) Ductus endolymphaticus

(2) Helicotrema

(3) Ductus utriculi

(4) Sacculo utricular canal

SO0093

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

SO0094

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

SO0095

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

SO0096

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

SO0097

78. 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

SO0098

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

SO0099

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

SO0100

81. 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

SO0101

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

SO0102

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

SO0103

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

SO0104

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

SO0105

86. 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 ear and internal ear for protecting them from damage by loud sound

SO0106

87. 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

SO0107

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

SO0108

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

SO0109

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

SO0110

91. 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

SO0111

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

SO0112

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

SO0113

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

SO0114

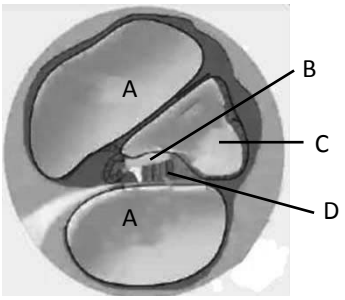
95. Otoconia made up of _A_ and it is present in _B_. What is A and B respectively ?
(1) Endolymph, $CaCO_3$
(2) $CaPO_4$, Endolymph
(3) $CaCO_3$, Endolymph
(4) $CaCO_3$, Perilymph

SO0187

96. In mammalian ear, a membranous structure which separate the scala vestibuli and scala media is
(1) Basilar membrane
(2) Otolith membrane
(3) Reissner's membrane
(4) Tectorial membrane

SO0188

97. 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

SO0117

98. Passage connecting middle ear with pharynx is called :-

(1) Cochlear canal

(2) Vestibular canal

(3) Tympanic canal

(4) Eustachian canal

SO0118

EXERCISE-I (Conceptual Questions) ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	**4**	**1**	**3**	**3**	**1**	**2**	**2**	**4**	**1**	**3**	**1**	**1**	**3**	**2**	**4**
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	**2**	**1**	**2**	**4**	**2**	**2**	**3**	**2**	**4**	**3**	**2**	**4**	**2**	**1**	**3**
Que.	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45
Ans.	**2**	**3**	**1**	**2**	**2**	**1**	**1**	**3**	**4**	**2**	**2**	**1**	**2**	**1**	**4**
Que.	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
Ans.	**1**	**4**	**4**	**4**	**3**	**3**	**2**	**3**	**2**	**3**	**1**	**4**	**1**	**4**	**4**
Que.	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
Ans.	**3**	**2**	**2**	**1**	**1**	**2**	**1**	**2**	**3**	**2**	**3**	**4**	**2**	**1**	**1**
Que.	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90
Ans.	**2**	**4**	**3**	**2**	**3**	**2**	**4**	**4**	**2**	**3**	**4**	**1**	**3**	**2**	**3**
Que.	91	92	93	94	95	96	97	98							
Ans.	**2**	**2**	**2**	**2**	**3**	**3**	**2**	**4**							

EXERCISE-II (Previous Year Questions) AIPMT/NEET

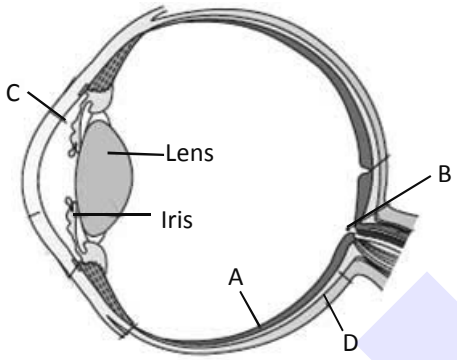
AIPMT-Pre 2012

1. Which part of the human ear plays no role in hearing as such but is otherwise very much required?
(1) Vestibular apparatus
(2) Ear ossicles
(3) Eustachian tube
(4) Organ of corti

SO0119

NEET-UG 2013

2. Parts A, B, C and D of the human eye are shown in the diagram. Select the option which gives correct identification along with its functions/characteristics:-



(1) D- Choroid - its anterior part forms ciliary body
(2) A - Retina - contains photo receptors–rods and cones
(3) B - Blind spot - has only a few rods and cones
(4) C - Aqueous chamber-reflects the light which does not pass through the lens

SO0121

AIPMT 2014

3. Which one of the following statements is **not correct** ?
(1) Retinal is the light absorbing portion of visual photo pigments.
(2) In retina the rods have the photopigment rhodopsin while cones have three different photopigments.
(3) Retinal is a derivative of Vitamin C.
(4) Rhodopsin is the purplish red protein present in rods only.

SO0123

AIPMT 2015

4. A gymnast is able to balance his body upside down even in the total darkness because of :-
(1) Vestibular apparatus
(2) Tectorial membrane
(3) Organ of Corti
(4) Cochlea

SO0125

Re-AIPMT 2015

5. In mammalian eye, the 'fovea' is the center of the visual field, where :
(1) more rods than cones are found.
(2) high density of cones occur, but has no rods
(3) the optic nerve leaves the eye
(4) only rods are present

SO0126

NEET-I 2016

6. Photosensitive compound in human eye is made up of :-
(1) Guanosine and Retinol
(2) Opsin and Retinal
(3) Opsin and Retinol
(4) Transducin and Retinene

SO0127

NEET-II 2016

7. Choose the **correct** statement.
(1) Photoreceptors in the human eye are depolarized during darkness and become hyperpolarized in response to the light stimulus.
(2) Receptors do not produce graded potentials.
(3) Nociceptors respond to changes in pressure.
(4) Meissner's corpuscles are thermo receptors.

SO0128

NEET(UG) 2017

8. Good vision depends on adequate intake of carotene rich food :
Select the best option from the following statements :
(a) Vitamin A derivatives are formed from carotene
(b) The photopigments are embedded in the membrane discs of the inner segment
(c) Retinal is a derivative of Vitamin A
(d) Retinal is a light absorbing part of all the visual photopigments
Options :
(1) (a), (c) and (d)
(2) (a) and (c)
(3) (b), (c) and (d)
(4) (a) and (b)

SO0131

NEET(UG) 2018

9. The transparent lens in the human eye is held in its place by
(1) ligaments attached to the ciliary body
(2) ligaments attached to the iris
(3) smooth muscles attached to the iris
(4) smooth muscles attached to the ciliary body

SO0132

NEET(UG) 2019

10. Which of the following statements is **correct** ?
(1) Cornea is an external, transparent and protective proteinacious covering of the eye-ball.
(2) Cornea consists of dense connective tissue of elastin and can repair itself.
(3) Cornea is convex, transparent layer which is highly vascularised.
(4) Cornea consists of dense matrix of collagen and is the most sensitive portion of the eye.

SO0151

NEET(UG) 2019 (Odisha)

11. Which of the following receptors are specifically responsible for maintenance of balance of body and posture?
(1) Basilar membrane and otoliths
(2) Hair cells and organ of corti
(3) Tectorial membrane and macula
(4) Crista ampullaris and macula

SO0152

NEET(UG) 2020

12. Match the following columns and select the **correct** option.

Column -I		**Column - II**
(a) Organ of Corti	(i)	Connects middle ear and pharynx
(b) Cochlea	(ii)	Coiled part of the labyrinth
(c) Eustachian tube	(iii)	Attached to the oval window
(d) Stapes	(iv)	Located on the basilar membrane

	(a)	**(b)**	**(c)**	**(d)**
(1)	(i)	(ii)	(iv)	(iii)
(2)	(ii)	(iii)	(i)	(iv)
(3)	(iii)	(i)	(iv)	(ii)
(4)	(iv)	(ii)	(i)	(iii)

SO0153

NEET(UG) 2020 (COVID-19)

13. Match the following columns and select the correct option :

Column - I		**Column - II**
(a) Rods and Cones	(i)	Absence of photoreceptor cells
(b) Blind Spot	(ii)	Cones are densely packed
(c) Fovea	(iii)	Photoreceptor cells
(d) Iris	(iv)	Visible coloured portion of the eye

(1) (a)-(iii), (b)-(i), (c)-(ii), (d)-(iv)
(2) (a)-(ii), (b)-(iii), (c)-(i), (d)-(iv)
(3) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)
(4) (a)-(ii), (b)-(iv), (c)-(iii), (d)-(i)

SO0154

NEET(UG) 2021 (Paper-2)

14. The cornea is the anterior portion of

(1) Choroid (2) Sclera

(3) Retina (4) Fovea

SO0189

NEET(UG) 2022 (OVERSEAS)

15. Match **List-I** with **List-II** regarding sensory organs in human.

(a) Organ of corti	(i) Photo receptors
(b) Nasal mucosa	(ii) Gustatory receptors
(c) Taste buds	(iii) Auditory receptors
(d) Retina	(iv) Olfactory receptors

Choose the **correct answer** from the options given below :

(1) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)

(2) (a)-(iv), (b)-(iii), (c)-(i) (d)-(ii)

(3) (a)-(iii), (b)-(i), (c)-(ii). (d)-(iv)

(4) (a)-(ii), (b)-(iv), (c)-(iii), (d)-(i)

SO0190

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	**1**	**2**	**3**	**1**	**2**	**2**	**1**	**1**	**1**	**4**	**4**	**4**	**1**	**2**	**1**

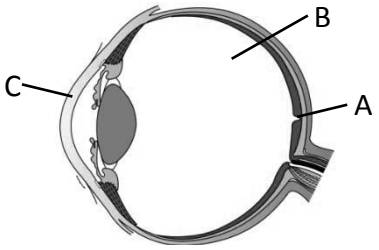
EXERCISE-III

Master Your Understanding

EXERCISE-III(A) (NCERT BASED QUESTIONS)

1. The external layer of eye is composed of a dense connective tissue and is called :
(1) Choroid (2) Sclera
(3) Retina (4) Conjunctiva
SO0155

2. In the following figure A, B and C are :



(1) A=Fovea, B=Vitrous chamber, C=Cornea
(2) A=Cornea, B=Fovea, C=Vitrous chamber
(3) A=Vitrous chamber, B=fovea, C=Cornea
(4) A=Fovea, B=Cornea, C=Vitrous chamber
SO0156

3. Human eye can distinguish red, green and blue colours due to presence of :
(1) Three types of cones
(2) Three types of Rods
(3) Corpus luteum
(4) Macula densa cells
SO0157

4. Which of the following statement is correct:
(1) Blind spot is the point where the visual acuity is the greatest.
(2) Rods contain a protein called visual violet.
(3) The space between the cornea and the lens is called the aqueous chamber.
(4) The diameter of the pupil is regulated by the fovea.
SO0158

5. Action potential generated in which layer of retinal cells :
(1) Corneal cells
(2) Ganglionic cells
(3) Photoreceptor cells
(4) Bipolar neuron
SO0159

6. Mark the incorrect statement :
(1) Visible wave length focussed on the retina through the cornea and lens.
(2) Photopigment in human eye is composed of opsin and retinal.
(3) In human eye neural impulses are analysed and the image is formed on visual cortex.
(4) Opsin is a protein and retinal is an aldehyde of Vitamin–A.
SO0160

7. Dissociation of the retinal from opsin occurs due to :
(1) Light (2) Sound
(3) Water (4) All of these
SO0161

8. Visual purple is composed of :
(1) Only opsin (2) Only retinal
(3) Both opsin and retinal
(4) Only vitamin–A
SO0162

9. Fovea is the point where the visual acuity is the greatest because :
(1) Here only the cones are densely packed.
(2) Here both cones and rods are densely packed.
(3) Both rods and cones are absent.
(4) Only here membrane permeability changes.
SO0163

10. In front of lens, the aperture surrounded by the iris is called the :
(1) Pupil (2) Opsin
(3) Sclera (4) Choroid
SO0164

11. The correct sequence of cells present in retina from outside to inside is :
(1) Bipolar cells → Photoreceptor cells → Visual cortex
(2) Photoreceptor cells → Bipolar cells → Ganglionic cells
(3) Photoreceptor cells → Visual cortex → Bipolar cells
(4) Ganglionic cells → Bipolar cells → Photoreceptor cells
SO0165

12. When all types of cones of retina are stimulated equally :
(1) Sensation of white light is produced
(2) Bipolar cells produces a action potential
(3) In ganglionic cells structure of opsin changes
(4) Rods regulated diameter of the pupil

SO0166

13. Match the column–I and column–II

Column-I		Column-II	
q	Malleus	i.	Attached to oval window
r	Incus	ii.	Anvil shape
s	Stapes	iii.	Attached to tympanic membrane

(1) q–ii, r–iii, s–i
(2) q–iii, r–ii, s–i
(3) q–i, r–ii, s–iii
(4) q–iii, r–i, s–ii

SO0167

14. Which of the following statement is correct:
(1) Eustachian tube helps in equalising the pressure on either sides of the oval window.
(2) Eustachian valve connects the middle ear cavity with the pharynx.
(3) Eustachian tube helps in equalising the pressure on either sides of the eardrum.
(4) When we sneeze, swallow or yawn our Eustachian tubes is closed.

SO0168

15. The fluid–filled inner ear called labyrinth consists of :
(1) Two parts, the bony and the membranous labyrinth.
(2) Wax secreting sebaceous glands
(3) Pinna and external auditory meatus.
(4) Both (1) and (2)

SO0169

EXERCISE-III(B) (ANALYTICAL QUESTIONS)

16. The inner ear also contain a complex system called vestibular apparatus, located above the :
(1) Choroid (2) Cornea
(3) Cochlea (4) Malleus

SO0170

17. Above the rows of the hair cell in cochlea is a thin elastic membrane called :
(1) Reissner's membrane
(2) Tectorial membrane
(3) Basilar membrane
(4) Filtration membrane

SO0171

18. On which place presence of hair cells act as auditory receptors :
(1) Basilar membrane (2) Crista ampullaris
(3) Macula (4) All of these

SO0172

19. The waves in the lymph of internal ear induce a ripple in the :
(1) Tympanic membrane
(2) Tectorial membrane
(3) Basilar membrane
(4) Ear drum

SO0173

20. In ear, impulses are transmitted by the afferent fibres via _____ to the auditory cortex of the brain :
(1) Olfactory nerve (2) Optic nerve
(3) Facial nerve (4) Auditory nerve

SO0174

21. Mark the correct statement :
(1) Vestibular apparatus is influenced by gravity and movements
(2) Vestibular apparatus is a part of middle ear.
(3) The external ear receives sound waves and directs them to the round window
(4) Both (1) and (2)

SO0175

22. Vibrations are passed through the oval window on to the fluid of the cochlea, where
(1) Impulses are generated in the associated efferent neurons.
(2) They generate waves in the lymph
(3) Impulses are analysed and the sound is recognised.
(4) Impulses are transmitted by spinal nerves.

SO0176

23. In cochlea scala tympani terminates at the :
(1) Round window
(2) Oval window
(3) Ear drum
(4) Auditory cortex of brain

SO0177

24. The crista and macula are the specific receptors of the :
(1) Cochlea
(2) Auditory meatus
(3) Vestibular apparatus
(4) Auditory cortex

SO0178

25. Which of the following statement is true for ampulla ?
(1) It is part of cochlea.
(2) Here impulses are analysed and the sound is recognised
(3) In it movements of the basilar membrane bends the hair cells
(4) It contains a projecting ridge called crista ampullaris

SO0179

26. Vestibular apparatus responsible for maintenance of _____ and _____.
(1) Balance of the body, hearing
(2) Hearing, posture
(3) Posture, vision
(4) Balance of the body, posture

SO0180

27. Match the column–I with column–II

Column-I		Column-II	
A	Pupil	i.	Vestigeal in human
B	Plica Semilunaris	ii.	Iris regulates its diameter
C	Canal of Schlemm	iii.	Consisting of the saccule and utricle
D	Otolith organ	iv.	Aquous humor drain from it

(1) A–i, B–iii, C–iv, D–ii
(2) A–ii, B–i, C–iv, D–iii
(3) A–ii, B–iii, C–i, D–iv
(4) A–iii, B–i, C–ii, D–iv

SO0181

28. Mark the correct statement :
(1) Eye ball is composed of three layers.
(2) Choroid layer is thin over the posterior two–thirds of the eye ball.
(3) There are very fine hairs and wax–secreting sebaceous glands in the skin of the pinna and the meatus
(4) All of these

SO0182

29. In eye there is a yellowish pigmented spot called:
(1) Corpus luteum (2) Macula lutea
(3) Macula densa (4) Crista ampullaris

SO0183

30. Mark the incorrect statement :
(1) Eye ball contains a transparent crystalline lens
(2) Vitreous chamber is filled with thin watery fluid called vitreous humor
(3) The pinna collects the vibrations in the air, which produce sound
(4) The ear ossicles increase the efficiency of transmission of sound waves to the inner ear.

SO0184

EXERCISE-III — ANSWER KEY

Que.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ans.	**2**	**1**	**1**	**3**	**2**	**3**	**1**	**3**	**1**	**1**	**2**	**1**	**2**	**3**	**1**
Que.	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Ans.	**3**	**2**	**1**	**3**	**4**	**1**	**2**	**1**	**3**	**4**	**4**	**2**	**4**	**2**	**2**