



PHYSIOLOGY (OCULAR)
SEMESTER - 2



Time : 3 Hours]

[Full Marks : 70

Graph sheet is provided on Page No. 31.

GROUP - A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for any *ten* of the following : 10 × 1 = 10

i) Normal IOP is

a) 1-30 mm Hg

b) 5.5-15.5 mm Hg

c) 10.5-20.5 mm Hg

d) 20-30 mm Hg.

ii) The lens derives its nourishment entirely from

a) Vitreous humour

b) Aqueous humour

c) Perilimbal capillaries

d) Atmospheric oxygen.

iii) The dilator pupillae is supplied by

a) Trigeminal nerve

b) Cervical sympathetic nerve

c) Oculomotor nerve

d) Cervical parasympathetic nerve.

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iv) The primary colours are *all except*

a) Yellow

b) Green

c) Blue

d) Red.



v) The lipid layer of the tear film is secreted by

a) ciliary muscle

b) ciliary processes

c) choroid

d) iris.

vi) Henle's layer is also known as

a) Inner plexiform layer

b) Inner nuclear layer

c) Outer plexiform layer

d) Outer nuclear layer.

vii) Action of superior oblique is

a) Elevation

b) Depression

c) Adduction

d) Extorsion.

viii) Polycoria means

a) more than one cornea

b) more than one pupil

c) eccentric pupil

d) none of these.

ix) The thickest part of the retina is

a) Umbob)

Clivus

c) Foveola

d) None of these.



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- x) In humans the normal spontaneous blink rate ranges from
- a) 10 to 15 times per min. b) 5 to 10 times per min.
- c) 12 to 20 times per min. d) none of these.
- xi) In dichromatic colour vision, the complete green colour defect is called
- a) Deuteranomalous b) Tritanomalous
- c) Deuteranopia d) None of these.



GROUP - B

(Short Answer Type Questions)

Write short notes on any *three* of the following.

3 × 5 = 15

2. E.R.G.
3. Binocular single vision.
4. Blood-ocular barriers.
5. Young-Helmholtz theory of colour vision.
6. Ocular rigidity.

GROUP - C

(Long Answer Type Questions)


Answer any *three* of the following.

3 × 15 = 45

7. Give the normal corneal endothelium cell count. Mention the physiological function of the corneal endothelium. What do you mean by corneal hydration ? Describe the factors affecting the corneal transparency. 2 + 3 + 3 + 7
8. a) With the help of a diagram, describe the different layers of the tear film. Discuss their functions also.
- b) What do you mean by Direct and Consensual light reflexes ?
- c) Draw a diagram showing the light reflex pathway in detail. (4 + 4) + 2 + 5

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9. a) Write about the glucose metabolism of lens. 
- b) What are the different types of cataract ? Describe any one of them. 9 + 6
10. a) Describe the supranuclear control of eye movements.
- b) Give the actions of the different extra-ocular muscles along with their nerve supply.
- c) What is yoke muscle ? Give an example. 5 + 8 + 2
11. a) Define dark adaptation.
- b) What is light minimum ?
- c) Draw a graph of dark adaptation with retinal sensitivity along the vertical axis and duration of dark adaptation along the horizontal axis.
- d) What are the factors that regulate dark adaptation ? 2 + 2 + 4 + 7

END