

B.Sc. Allied Health Sciences Second Year Semester-III (CBCS Scheme)

February – 2018 Examination

B.Sc. Ophthalmic Technology (OPH)

Time: 3 Hrs.

Paper – I

[Max. Marks: 100]

Ocular Anatomy & Ocular Physiology

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

(Use separate answer booklet for Section A & B)

Section – A

Ocular Anatomy (50 Marks)

Q.P Code : OPH301CC

LONG ESSAY

2 X 10 = 20 Marks

1. Explain extra ocular muscles, its origin insertion, nerve supply and action.
2. Explain layers of retina and its applied anatomy.

SHORT ESSAY (Answer any three)

3 X 5 = 15 Marks

3. Optic nerve.
4. Ciliary ganglion.
5. Lacrimal apparatus.
6. Classify simple epithelium with examples.
7. Visual pathway and its lesions.

SHORT ANSWERS (Answer any five)

5 X 3 = 15 Marks

8. Central artery of retina.
9. Histology of cornea.
10. Eyelid glands.
11. Conjunctiva.
12. Structure passing through superior orbital fissure.
13. Name the higher visual centres and its functions.
14. Name the bones forming the bony orbit.

Section – B

Ocular Physiology (50 Marks)

Q.P Code : OPH302CC

(Use separate answer booklet for Section-B)

LONG ESSAY

2 X 10 = 20 Marks

1. What is color vision? Mechanism of color vision. Color blindness and tests for color vision.
2. Trace the visual pathway with neat labeled diagram. Describe the effect of lesions at different parts of the visual pathway.

SHORT ESSAY (Answer any three)

3 X 5 = 15 Marks

3. Refractive errors and its correction.
4. Light reflex.
5. Dark adaptation.
6. Rhodopsin.
7. Accommodation reflex.

SHORT ANSWERS (Answer any five)

5 X 3 = 15 Marks

8. Glaucoma.
9. Lacrimal apparatus.
10. List the differences between Rods and cones.
11. Binocular vision.
12. List the extra ocular muscles.
13. Blind spot.
14. Visual cortex.

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Paper – II

[Max. Marks: 100]

Ocular Microbiology & Ocular Biochemistry

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

(Use separate answer booklet for Section A & B)

Section – A

Ocular Microbiology (50 Marks)

Q.P Code : OPH303CC

LONG ESSAY

2 X 10 = 20 Marks

1. Name the free living amoebae. Describe the source, risk factors, clinical features and laboratory diagnosis of Acanthamoeba keratitis.
2. Name the viruses causing eye infections. Describe the pathogenesis and laboratory diagnosis of Herpes keratitis.

SHORT ESSAY (Answer any three)

3 X 5 = 15 Marks

3. Chlamydia trachomatis
4. Describe parasites causing infection of eye.
5. Describe the infection of the eye caused by Neisseria gonorrhea.
6. Autoclave – working principle and uses.
7. Aspergillosis in eye.

SHORT ANSWERS (Answer any five)

5 X 3 = 15 Marks

8. Oestrus ovis.
9. Viruses transmitted by corneal transplant.
- 10 Draw a neat labelled diagram of Aspergillus species.
11. KOH preparation.
12. Name the bacteria causing post eye surgery infections.
- 13 Enumerate the different samples collected in eye infections.
14. Biomedical waste management.

Section – B

Ocular Biochemistry (50 Marks)

Q.P Code : OPH304CC

(Use separate answer booklet for Section-B)

LONG ESSAY

2 X 10 = 20 Marks

1. Explain the aqueous humour – composition and functions.
2. Write the role of vitamin E in ocular biochemistry. What is the importance of optometric practice?

SHORT ESSAY (Answer any three)

3 X 5 = 15 Marks

3. Glycosaminoglycans.
4. Composition and function of Tear film.
5. Describe lens proteins.
6. Ageing effect on lens
7. Describe the structure, biochemical composition and functions of vitreous humour. .

SHORT ANSWERS (Answer any five)

5 X 3 = 15 Marks

8. What is glaucoma?
9. Photoreceptor cells.
- 10 Phagocytosis.
11. Gamma amino butyric acid.
12. Biochemical composition of corneal epithelium.
- 13 Irrigating solutions.
14. List the functions of Vitamin C.

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Paper - III

[Max. Marks : 100]

Physical and Physiological Optics

Q.P Code : OPH305CC

Your answers should be specific to the questions asked.

Draw neat labelled diagrams wherever necessary.

LONG ESSAY

2 X 10 = 20 Marks

1. Define Myopia. Write about the types, clinical features and treatment of myopia.
2. Draw a diagram and describe the principle of radioscopy. Write a note on different methods of retinoscopy.

SHORT ESSAY (Answer any Ten)

10X 5 = 50 Marks

3. Define AC/A ratio. Write the various methods to calculate AC/A ratio.
4. Describe the characteristics of the neutralization point.
5. Define Astigmatism and types of astigmatism.
6. Write about the principle of autorefractometer and types of autorefractometer.
7. Duochrome test.
8. Describe the methods of correct spherical aberration.
9. Describe a trial set.
10. Bifocal lens.
11. Write a note on measurement of interpupillary distance.
12. Objective refraction in keratoconus.
13. Jackson's cross cylinder.
14. Correction of unilateral aphakia in the presence of normal fellow eye.

SHORT ANSWERS (Answer any Ten)

10 X 3 = 30 Marks

15. Draw a diagram of Strum's conoid.
16. Fresnel prisms.
17. Far point.
18. Astigmatic fan.
19. Write a simple transposition of the following prescription: -3.00DS+1.00DC@90.
20. Geneva Lens measure.
21. Draw a diagram of reduced eye and name the cardinal points.
22. Pin Hole test.
23. Cycloplegics used in refraction.
24. Photochromic lenses.
25. Anisometropia.
26. What is Spherical equivalent? Write the spherical equivalent of the following prescription: +2.00DS/+2.00DC@90.