

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

February – 2017 Examination

B.Sc. Ophthalmic Technology (OPH)

Paper – I

[Max. Marks : 80]

Time : 2.30Hrs.

**Ocular Anatomy and 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 (40 Marks)**

**Q.P Code : AHS-124**

**LONG ESSAY**

**1 X 10 = 10 Marks**

1. Describe the visual pathway with a neat labeled diagram. Describe the lesions and its effects at various levels.

**SHORT ESSAY (Answer any three)**

**3 X 5 = 15 Marks**

2. Microscopic structure of retina.
3. Fertilization.
4. Derivatives of optic cup.
5. Structure of eyelids.

**SHORT ANSWERS (Answer any five)**

**5 X 3 = 15 Marks**

6. Nasolacrimal duct.
7. Ciliary body.
8. Optic disc.
9. Sclera.
10. Vitreous humor.
11. Ciliary ganglion.

**Section – B**

**Ocular Physiology (40 Marks)**

**Q.P Code : AHS-125**

**(Use separate answer booklet for Section-B)**

**LONG ESSAY**

**1 X 10 = 10 Marks**

1. "Describe briefly the retinal correspondence".

**SHORT ESSAY (Answer any three)**

**3 X 5 = 15 Marks**

2. Briefly explain the process of dark adaptation of vision.
3. Explain the layers of cornea and factors maintaining its transparency.
4. Define visual acuity. Name and explain the tests of visual acuity for distant and near vision.
5. Describe the refractive errors of eye. How they are corrected?

**SHORT ANSWERS (Answer any five)**

**5 X 3 = 15 Marks**

6. Tabulate the differences between rods and cones.
7. Functions of lacrimal apparatus.
8. What is intraocular pressure? Give normal value.
9. Name the extraocular muscles and the cranial nerves innervating them.
10. Name the branches of autonomic nervous system and their action on pupil.
11. List the tests for color vision

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**B.Sc. Ophthalmic Technology (OPH)**

**Paper – II**

**Time : 2.30 Hrs.**

**[Max. Marks : 80]**

**Ocular Microbiology and 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 (40 Marks)**

**Q.P Code : AHS-126**

**LONG ESSAY**

**1 X 10 = 10 Marks**

1. Enumerate the micro organisms infecting the eye. Describe the sample collection methods for infections of the eye.

**SHORT ESSAY (Answer any three)**

**3 X 5 = 15 Marks**

2. Methicillin resistant staphylococcus aureus.
3. Cytomegalo virus infections of eye.
4. Acanthamoeba.
5. Fusarium.

**SHORT ANSWERS (Answer any five)**

**5 X 3 = 15 Marks**

6. Name three viruses causing eye infections.
7. Enumerate the agents causing blepharitis.
8. Enumerate agents causing conjunctivitis.
9. Enumerate the agents causing endophthalmitis.
10. Name three fungi causing infections of the eye.
11. Draw a neat labeled diagram of the gram stain picture of corynebacterium diphtheria.

**Section – B**

**Ocular Biochemistry (40 Marks)**

**Q.P Code : AHS-127**

**(Use separate answer booklet for Section-B)**

**LONG ESSAY**

**1 X 10 = 10 Marks**

1. Describe the bio-chemical composition of cornea. How does cornea get its nutrition?

**SHORT ESSAY (Answer any three)**

**3 X 5 = 15 Marks**

2. Collagen-structure and functions.
3. Aqueous humor-Composition and functions.
4. Importance of ocular biochemistry in clinical optometric practice.
5. Senile Cataract.

**SHORT ANSWERS (Answer any five)**

**5 X 3 = 15 Marks**

6. Benedicts test.
7. Glutathione.
8. Tear substitutes.
9. Intraocular gels.
10. Hyaluronic acid.
11. Rhodopsin.

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Paper - III

Physical & Physiological Optics

Q.P Code : AHS-128

Time : 2.30 Hrs.

[Max. Marks : 80]

*Your answers should be specific to the questions asked.  
Draw neat labelled diagrams wherever necessary.*

**LONG ESSAY**

2 X 10 = 20 Marks

1. What is retinoscopy. Describe with neat diagrams the principle of retinoscopy.
2. Describe the optics in an Aphakic eye. Add a note on correction of Aphakia.

**SHORT ESSAY (Answer any Six)**

6X 5 = 30 Marks

3. Sturms conoid.
4. Lensometer.
5. Reduced eye.
6. Jackson's cross cylinder.
7. What is presbyopia? What are the symptoms and how do you treat.
8. Progressive lenses.
9. RGP lenses.
10. Simple transposition.

**SHORT ANSWERS (Answer any Ten)**

10 X 3 = 30 Marks

11. Classify myopia.
12. Maddox rod.
13. Stenopeic slit.
14. Streak retinoscope.
15. Uses of prisms.
16. Optics of keratoconus.
17. Jaeger's chart.
18. Nodal point.
19. Snell's laws of refraction.
20. Spherical aberration.
21. Define astigmatism.
22. Latent hypermetropia.