

Question Paper

Exam Date & Time: 20-Jun-2024 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER BACHELOR OF OPTOMETRY DEGREE EXAMINATION-JUNE 2024
SUBJECT: OPT2101- OPTOMETRIC INSTRUMENTATION
(SCHEME 2020)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1A) What are the different landmarks of retina required to observe during funduscopy? (5)
- 1B) Write in detail about the techniques of indirect slit lamp fundus biomicroscopy. (5)
- 1C) Compare the field of view, magnification level and working distance of various condensing SLM BIO lens. (5)
- 1D) How can you document the fundus findings? (5)
- 2A) Mention the principle of retinoscope. Describe the plane mirror and concave mirror effect. (6)
- 2B) With the help of diagram, describe the observation and illumination system for a streak retinoscope. (7)
- 2C) Describe the following retinoscopy reflexes and mention their significance in retinoscopy techniques. (7)
- i) With movement
- ii) Against movement
- iii) Neutral point
- 3A) What are the indications for exophthalmometry? (2)
- 3B) Compare between luedde and hertel exophthalmometer (4)
- 3C) Briefly describe the procedure of exophthalmometry (4)
- 4) Write in detail about angle of anterior chamber structures and different grading systems used (10)

5) Short Notes:

- 5A) False positive and false negative error during H.V.F testing (5)
- 5B) Role of pachymetry readings in clinical practice (5)
- 5C) Optical system of binocular indirect ophthalmoscope (5)
- 5D) Goldmann applanation tonometer -Principle and procedure (5)
- 5E) Clinical applications of topography readings. (5)
- 5F) Disease conditions where fluorescein angiography is used (5)

6) Answer the following question:

- 6A) What is an excitation and barrier filter? (2)

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| 6B) | Write two clinical indications of Visual evoked potentials (VEP) measurement. | (2) |
| 6C) | Define Imbert fick law and explain its limitation in clinical implication. | (2) |
| 6D) | Name two advanced retinal Imaging technique for assessing macular health | (2) |
| 6E) | What is Priestley - smith's mirror? | (2) |

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Question Paper

Exam Date & Time: 21-Jun-2024 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER BACHELOR OF OPTOMETRY DEGREE EXAMINATION-JUNE 2024
SUBJECT: OPT2102- OPTICS OF VISUAL SYSTEM
(SCHEME 2020)

Marks: 50

Duration: 120 mins.

Answer all the questions.

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| 1) | Explain the far point and near point for myopic and hyperopic refractive error | (10) |
| 2) | Describe various axis and angles of the eye with appropriate diagram | (10) |
| 3A) | Describe the spectral transmittance of human eye with a neat diagram | (5) |
| 3B) | Calculate the total power of the lens (consider the refractive index of lens to be 1.42) | (5) |
| 3C) | Define and draw Line of Sight and Pupillary Axis | (5) |
| 3D) | What are lower order aberrations? Briefly explain them. | (5) |
| 4A) | List TWO clinical application of purkinje images | (2) |
| 4B) | Explain the role of aperture on blur size | (2) |
| 4C) | Define the amplitude of accommodation | (2) |
| 4D) | Define retinal illuminance | (2) |
| 4E) | Explain about relative spectacle magnification | (2) |

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Question Paper

Exam Date & Time: 22-Jun-2024 (10:00 AM - 12:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

THIRD SEMESTER BACHELOR OF OPTOMETRY DEGREE EXAMINATION-JUNE 2024
SUBJECT: OPT2104- REFRACTIVE ERRORS
(SCHEME 2020)

Marks: 50

Duration: 120 mins.

Answer all the questions.

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| 1) | Describe the development and components of accommodation | (10) |
| 2) | Explain the guidelines for prescribing various refractive errors at different age groups | (10) |
| 3A) | Describe the different management options for presbyopia | (5) |
| 3B) | Write in detail about Anisekonion | (5) |
| 3C) | What is the role of near work on refractive error and myopia progression | (5) |
| 3D) | Explain the clinical importance of aberrations | (5) |
| 4A) | Define anisometropia | (2) |
| 4B) | Define conoid of Sturm | (2) |
| 4C) | Name the instrument used to measure the aberrations | (2) |
| 4D) | List four etiology of pathological myopia | (2) |
| 4E) | What is emmetropization? | (2) |

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