

Question Paper

Exam Date & Time: 22-Apr-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER MASTER OF OPTOMETRY DEGREE EXAMINATION - APRIL 2022
SUBJECT: OPT5103 - VISUAL NEUROSCIENCE
(2021 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1A) Design an experiment to measure functional vision for early detection of Diabetic Retinopathy. Comment on what stimulus, method you would choose. (10)
- 1B) Explain various psychophysical methods to estimate threshold (10)
- 2A) How CSF and Visual acuity are related? (10)
- 2B) What is EOG? Explain the working principle of EOG. In what disease conditions EOG will be affected. (10)
- 3A) Write about the properties of P, M and K pathways (10)
- 3B) Write about EOM primary, secondary and tertiary actions (10)
- 3C) What are the advantage of binocular vision? (5)
- i)
- ii) How many types of conjugate eye movements we have? List them. (5)
- 3D) What is excitatory and inhibitory neurotransmitters? (5)
- i)
- ii) Describe pulse step innervation of saccades (5)
- 4A) Write about VOR reflex (5)
- 4B) Draw a neat diagram of a neuron (5)
- 4C) Define Hering's law of equal innervation (2.5)
- i)
- ii) Alexander's law defines relationship between what? (2.5)
- 4D) What are two kinds of OKN? (2.5)
- i)
- ii) What are the four types of congenital colour vision deficiency? (2.5)

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