



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY
(MMUST)**

MAIN CAMPUS

**UNIVERSITY EXAMINATIONS
2021/2022 ACADEMIC YEAR**

**MAIN EXAMS
FOR FIRST YEAR SECOND TRIMESTER EXAMINATION FOR
MASTER OF SCIENCE IN OPTOMETRY AND VISION SCIENCE**

COURSE CODE: MOV 823

COURSE TITLE: NEUROPHYSIOLOGY AND PSYCHOPHYSICS
OF VISION

DATE: 25/04/2022

TIME: 8-11AM

INSTRUCTIONS TO CANDIDATES: ANSWER ALL QUESTION

TIME: 3 Hours

MMUST observes ZERO tolerance to examination cheating

ESSAY QUESTIONS: ANSWER ALL QUESTIONS (70 MARKS)

QUESTION ONE:

Using a well labelled diagram describe the visual pathway of human visual system (20 marks)

QUESTION TWO:

Psychophysical experiments show that the human visual system manifests greater spatial summation under dark-adapted conditions than under light adapted conditions. How could the receptive fields of ganglion cells change to account for this psychophysical finding? (15 marks)

QUESTION THREE:

Isoluminant gratings are thought by some investigators to “silence” the magno pathway. Because all the bars are of equal luminance, the grating is thought not to activate magno neurons. Present an argument against this hypothesis. (15 marks)

QUESTION FOUR:

Attempt an exhaustive discussion of the stages of visual development in an infant. Highlight in your discussion the different aspect of visual function that changes to enable the development of an infant’s eye to the level of function in an adult (20 marks)

THE END