



(University of Choice)

**MASINDE MULIRO UNIVERSITY OF
SCIENCE AND TECHNOLOGY**

(MMUST)

MAIN CAMPUS

UNIVERSITY MAIN EXAMINATIONS

2022/2023 ACADEMIC YEAR

FOURTH YEAR, SECOND SEMESTER EXAMINATIONS

FOR THE DEGREE OF

BACHELOR OF OPTOMETRY AND VISION SCIENCES

COURSE CODE: BOV 420

COURSE TITLE: LOW VISION II

DATE: 13/4/2023

TIME: 8.00-10.00 AM

INSTRUCTIONS TO CANDIDATES

Answer all Questions

Section A: Multiple choice questions (MCQ) (20 marks)

Section B: Short Answer Questions (SAQ) (30 marks)

Section C: Long Answer Questions (LAQ) (20 marks)

TOTAL 70 MARKS

TIME: 2 Hours

MMUST observes ZERO tolerance to examination cheating

This Paper Consists of SEVEN Printed Pages. Please Turn Over.

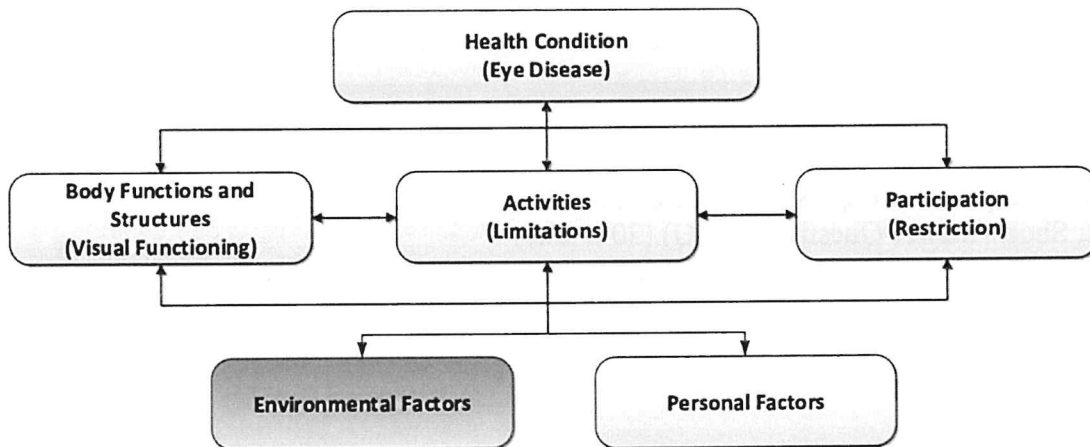
SECTION 1 MULTIPLE CHOICE QUESTIONS (20 MARKS)

1. Which of the following statement best describes the sight-impaired category? (1 mark)
 - A) Visual acuity of less than 3/60 with full visual field
 - B) 3/60 to 6/60 with full field
 - C) Visual acuity of 6/60 or above but with a very reduced field of vision especially if a lot of sights is missing in the patient’s lower part of a field
 - D) so blind as to be unable to perform any work for which eyesight is essential

2. Which of the following statements best describes the severely sight-impaired category? (1 mark)
 - A) Up to 6/24 Snellen with moderate contraction of the field, opacities in the media or aphakia
 - B) substantially and permanently handicapped by defective vision caused by a congenital defect or illness or injury
 - C) so blind as to be unable to perform any work for which eyesight is essential
 - D) 3/60 to 6/60 with full field

3. Which of the following statement best describes a social model of disability? (1 mark)
 - A) Views disability as a personal problem caused by disease, trauma or health condition
 - B) Disability requires medical care
 - C) At the political level the principal response is that of modifying or reforming health care policy.
 - D) It is the society that needs to make environmental modification necessary for the full participation of persons with disability

4. The ICF Model of Disability is as shown below. Which of the following description corresponds to participation? (1 mark)



- A) Problems in body structure and function
- B) Execution of tasks by an individual
- C) involvement in life situations
- D) outcomes of interactions between health conditions and contextual factors

5. Which of the following is the leading cause of visual impairment globally? (1 mark)

A) Uncorrected refractive errors

B) Cataracts

c)Diabetic retinopathy

D) Childhood blindness

6. Even if people can read the text of a certain size in the clinic, this doesn't mean that they'll be able to read fluently at this size. What is the definition of fluent reading according to Whittaker and lovie? (1 mark)

A) Reading more than 160 words/minute

B) Reading more than 40 words/minute

C) Reading more than 200 words/minute

D) Reading without hesitation

7. When determining the visual requirements during low vision assessment, the article by Whittaker and lovie is a key source of information. what is the required acuity reserve for fluent reading? (1 mark)

A) 3:1

B) 10:1

C)1:1

D) 2:1

8. Consider a patient who wants to fluently read a book at N12. What would be their ideal acuity threshold to read the book?

A) N2

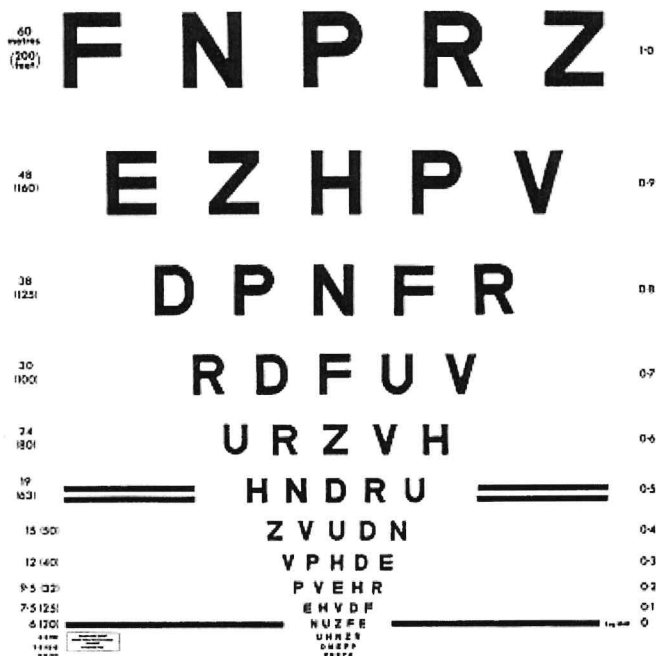
B) N3

C) N4

D) N12

E) N6

9. For logmar acuity below, If the person misses 2 letters on the 5th line down at 2M the first line being 1.0 What will be the visual acuity score for the patient?



- A) 0.6
- B) 0.94
- C) 0.66
- D) 0.54

10. When performing refraction, the reflex on retinoscopy gives us important information about the ocular media and potential pathology in a patient. What comes to mind when distorted reflex is observed?

- A) Pseudophakia
- B) poor VA due to retinal lesions
- C) lens opacity
- D) cornea problem

11. Identify two adaptations that can be made for retinoscopy routine for a low vision patient (2 marks)

- A) Use a brighter setting on your retinoscope
- B) use the normal working distance of arms length from the patient
- C) use high-power increments
- D) Use a dull setting on your retinoscope
- e) perform retinoscopy on the axis

12) What is the basis for working out the near magnification required for a low-vision patient?

- A) Establish the near acuity with a +4.00ADD in both eyes with near chart @ 25cm

- B) Establish the near acuity with a +4.00ADD in both eyes with near chart @ 40 cm
- C) Establish the near acuity by having the patient read the near chart @25 cm
- D) Establish the near acuity by having the patient read the near chart at their comfortable reading distance

13. The following are general rules of when we can prescribe for low-vision patients excerpt?

- A) When there are three lines of improvement on the LogMar chart
- B) When we feel the patient truly understands the limitations of prescribing
- C) When a real benefit can be seen using the prescription outside the test room e.g., outside a window
- D) When we are seeing the patient for the first time at the low-vision clinic

14. The patient correctly reads RSV (0.7%) on the Pelli Robson Contrast Sensitivity chart.

The sample of newspaper print they have brought in you estimate is 70% contrast. Do you expect the patient to read the newspaper fluently?

- A) YES
- B) NO

The patient can achieve a 10:1 contrast sensitivity reserve which is required for fluent reading.

$$\frac{\text{Newsprint contrast}}{\text{Pelli Robson result}} = \frac{0.7}{0.07}$$

$$= 10:1$$

15. A patient can read N24 at 25cm with a +4.00 ADD. He wants to read his newspaper with print size equivalent to N8. What is the expected magnification?

- A) X2
- B) X5
- C) X3
- D) X8

16. A patient wants to read the TV guide on the television.

You estimate this task requires 6/12 vision, but your patient's visual acuity is 6/60. What is the estimated magnification required?

- A) 3:1
- B) X2
- C) X3
- D) X5

17. Which two of the following is true about Pelli Robson chart? (2 marks)

- A) The Pelli-Robson letter chart is held at a viewing distance of 1 meter at eye level with clinic room lights on.
- B) The Pelli-Robson letter chart is held at a viewing distance of 2 meter at eye level with clinic room lights on.
- C) If the person gets two out of three letters correct in a triplet this is NOT scored as correct.
- E) Round letters such as O, C and D that are miscalled are NOT ignored.
- F) You need to allow the person time (about 30 seconds) to adapt as they read down the chart.

18. After low vision assessment one needs to Signpost and refer patients to appropriate agencies including to general practitioners when depression is a risk identified. Which of the following set of questions have been identified to be sensitive in detecting most cases of depression in general practice

- A)
 - I. Are you basically satisfied with your life? YES/NO
 - II. Have you dropped many of your activities & interests? YES/NO
- B) During the last month have you often been bothered by:
 - I. Feeling down, depressed or hopeless? YES/NO
 - II. Having little interest in pleasure in doing things? YES/NO
- C)
 - I. Are you afraid that something bad is going to happen to you? YES/NO
 - II. Do you feel happy most of the time? YES/NO
- D)
 - I. Do you feel you have more problems with memory than most? YES/NO
 - II. Do you think it is wonderful to be alive now? YES/NO

SECTION 2 (40 MARKS)

1. Patients diagnosed with retinitis pigmentosa often present with certain functional implications. Discuss any 3 behavioral manifestations of visual expected (6 Marks)
2. Discuss any three methods of controlling outdoor lighting (6 marks)
3. a) using relevant examples, differentiate between distance modification and size modification (2 marks)

b) Making private or public modifications both functional and comfortable for low-vision patients should be part of your low-vision standard practice. Discuss any three indoor modification designs that will increase the functionality of a low-vision patient (6 marks)
4. The reading speed required for tasks needs to be taken into account when considering magnification. Discuss three major visual factors that significantly affect reading performance (6 marks)
- 5 A) Spectacles remain the most prescribed treatment for all forms of aphakia. Highlight four barriers to the provision of spectacles for aphakia treatment (2 Marks)

B) Special modification to the assessment method and tools in the assessment of children with multiple disabilities can sometimes help gain more meaningful results. Highlight four characteristics of a modified assessment tool design for children with multiple disabilities (2 marks)

SECTION B (40 MARKS)

ANSWER ALL QUESTIONS

- 1.a) Discuss any five areas of development considered during early intervention services? (10 marks)
- b) Discuss any 5 Importance of early detection of low vision in children (10 marks)

END

