

**VINAYAKA MISSION'S RESEARCH FOUNDATIONS, SALEM  
(Deemed to be University)**

**B.OPTOMETRY DEGREE EXAMINATION – February 2020  
Third Year**

**LOW VISION AIDS**

Time: Three hours

Maximum: 80 marks

I Choose the best answer

(10 x 1 = 10)

1. Which of the following is type of impairment.  
a) Reduced visual field                      b) Reduced visual acuity  
c) Poor light and dark adaptation        d) Difficulty in going outdoors
2. Rehabilitation services includes all of the following EXCEPT  
a) Vocational guidance                      b) Technical & Mobility aids  
c) Vision stimulation                        d) Specialised educational services
3. N8 = \_\_\_\_ M  
a) 2    b) 0.5  
c) 1    d) 10
4. Following are examples of sensory substitution devices EXCEPT  
a) Talking Watch                                b) Braille slate  
c) Braille Geometry Set                        d) Cane
5. Spectacle magnifiers produce \_\_\_\_\_ magnification.  
a) Relative distance                            b) Relative size  
c) Angular                                         d) Projection
6. Retinitis Pigmentosa causes \_\_\_\_\_ Field loss  
a) Peripheral                                      b) Central  
c) Overall                                         d) Patchy
7. Difficulty in white rice in a white plate is an example of defect in which visual function?  
a) Colour vision                                b) Contrast sensitivity  
c) Visual acuity                                 d) Depth perception
8. For a low vision subject with an unaided visual acuity of 2/60, the “Just Noticeable Difference” sphere power would be  
a) 1.5 D    b) 3D  
c) 2D     d) 6D

(p.t.o)

-- (2)--

9. When N12 print is moved from 40cm to 20cm, \_\_\_\_\_ magnification is produced

- a) 3x
- b) 2x
- c) 4x
- d) 1x

10. Software 'JAWS' stands for

- a) Job and Work Speedily
- b) Job Access with Speech
- c) Job and Work with Speech
- d) Job Accessibility with Skype

II State whether the following statements are **TRUE** or **FALSE** (10 x 1 = 10)

1. 135 million people in India have low vision.
2. Hand Magnifiers are prescribed for distance correction.
3. Patients having visual acuity between the range 6/36 and 3/60 are more successful in using low vision aids.
4. Visual anticipation means ability to analyze the speed of the object and direction of movement – the eyes move with correct speed.
5. Optical low vision aids use magnifiers to enlarge the corneal image size.
6. A patient with severe contrast sensitivity loss may function better using reverse contrast, which can only be achieved with electronic magnification assistive technology.
7. According to Kestenbaum rule, the required magnification for a BCVA of 6/18 is 3X.
8. Usher's syndrome is a combination of RP and heart disease.
9. In an integrated education system, the blind and sighted children study in the same school.
10. CPF 550 is best suited for people with albinism.

III Fill in the blanks: (10 x 1 = 10)

1. Movement of magnifier during use is referred to as \_\_\_\_\_.
2. The \_\_\_\_\_ eye is tested first for low vision patients.
3. Rule: 1mm Base In decentration for every \_\_\_\_\_ of add.
4. Optical low vision aids use magnifiers to enlarge the \_\_\_\_\_ image size.
5. Retinoscopy is done using \_\_\_\_\_ aperture lenses for low vision patients.
6. Keplerian telescope offers a wide field of view as the \_\_\_\_\_ pupil is close to the eye piece.
7. \_\_\_\_\_ requires the development of a new preferred retinal locus (PRL) next to the scotoma which will be used as the "new" fovea.
8. Spectacle magnifiers provide \_\_\_\_\_ magnification.
9. As per the guidelines of ministry of welfare India, a one eyed person is said to have \_\_\_\_\_ impairment.
10. When a 3X telescope is combined with a +8.00 D reading cap, the total magnification produced is \_\_\_\_\_

(p.t.o.)

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IV Write any **FIVE** answers of the following:

(5 x 6 = 30)

1. What optical devices are prescribed in patients having field defects?
2. Define
  - a. WHO definition of low vision.
  - b. Visual disorder.
  - c. Visual impairment.
  - d. Visual disability.
  - e. Visual handicap.
3. In diabetic retinopathy – list 3 symptoms of the patient, 2 signs and 2 management steps that you take.
4. What are the psychological stages a person with low vision undergoes?
5. Compare and contrast Keplerian and Galilean telescope.
6. Explain the type of vision assessment charts used for low vision patients and why?
7. What is rehabilitation and mobility training? What is eccentric viewing and eccentric fixation?

V Write an essay on any **TWO** of the following:

(2 x 10 = 20)

1. Write in detail on non optical and electronic aids.
2. Retinitis Pigmentosa: Explain on the disease, prognosis, low vision devices that can be prescribed, follow up, special diagnostic tests required for the management.
3. Tabulates and compare the advantages and disadvantages of a stand and hand held magnifier.

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