

BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF SCIENCE & ENGINEERING

DEPARTMENT OF OPTOMETRY

BACHELOR OF SCIENCE HONOURS DEGREE IN OPTOMETRY

(OPT 203): BINOCULAR VISSION I

Duration. 3 HOURS

TOTAL MARKS: 100

CANDIDATE NUMBER:

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INSTRUCTIONS:

This paper consists of two sections, A and B. Answer section A on the question paper and section B in the answer booklet provided.

SECTION A Attempt all questions. (20 MARKS)

1. Which is the most appropriate test for phoria at 6 metres?
 - (a) Maddox Rod.
 - (b) Maddox Wing.
 - (c) Alternate cover test.
 - (d) Synoptophore.
2. Which is the most appropriate test for tropia?
 - (a) Kimsky test.
 - (b) Prism Cover test.
 - (c) Synoptophore.
 - (d) All the above.
3. Which is true of the use of the Major Amblyoscope?
 - (a) To measure the angle of deviation.
 - (b) To measure vergence amplitude.
 - (c) To check for suppression.
 - (d) All the above.

4. Which is not true of the uses of the Major Amblyoscope?
- (a) To check for fusion.
 - (b) To check for stereopsis.
 - (c) To check for accommodation.
 - (d) To check for suppression.
5. Which is true of the sensory mechanism?
- (a) There should be matching of the image clarity and size.
 - (b) The eyes should be cyclopean.
 - (c) There should normal visual pathways.
 - (d) All the above.
6. Which is the most appropriate test for phoria at 40 cm?
- (a) Maddox Rod.
 - (b) Maddox Wing.
 - (c) Alternate cover test.
 - (d) Synoptophore.
7. Which is/ are the grades of binocular vision?
- (a) Simultaneous perception.
 - (b) Fusion.
 - (c) Stereopsis.
 - (d) All the above.
8. Which is not true of the fundamentals of the mental process?
- (a) The visual axes must be directed at the object.
 - (b) There should be overlap of the visual fields.
 - (c) There should be normal visual pathways.
 - (d) All the above.
9. Which is true of Binocular Single Vision?
- (a) It needs one eye only.
 - (b) It needs two eyes with equal acuities.
 - (c) It needs two eyes with unequal acuities.
 - (d) It needs two eyes with unclear images from one eye.

10. Which is true in Monovision?
- (a) There is vision with a single eye.
 - (b) There is vision with two eyes.
 - (c) There is vision with two uncoordinated eyes.
 - (d) None of the above.
11. Which is true of Binocular Vision?
- (a) There is vision with a single eye.
 - (b) There is vision with two coordinated eyes.
 - (c) There is vision with two uncoordinated eyes.
 - (d) None of the above.
12. Which is not true of Binocular Vision?
- (a) There is vision with a single eye.
 - (b) There is vision with two coordinated eyes.
 - (c) There is vision with two uncoordinated eyes.
 - (d) None of the above.
13. Which is/ are the pre-requisites for Binocular Single Vision?
- (a) Sensory mechanism.
 - (b) Motor mechanism.
 - (c) Mental process.
 - (d) All the above.
14. Which is true of the most significant motor mechanism?
- (a) There should be overlap of the visual fields.
 - (b) There should be normal visual pathways.
 - (c) There should be the ability to promote Binocular Single Vision.
 - (d) There should be approximate equal image clarity and size from the two eyes.
15. With the Bagollini lenses set at 135° and 45° (right and left respectively)
- (a) With the right eye suppression is when the 45° line is missing.
 - (b) With the right eye suppression only the 135° line is missing.
 - (c) With the right eye suppression both lines are missing.
 - (d) With the right eye suppression both lines are seen.

16. Which is true when using the Bagollini Lenses?
- (a) In exotropia there will be diplopia with Normal retinal correspondence.
 - (b) In esotropia there will be diplopia with Normal retinal correspondence.
 - (c) There will be two dots and two lines in normal retinal correspondence.
 - (d) All the above.
17. When conducting the 'after image test'.
- (a) Both lines cross in normal retinal correspondence.
 - (b) For the right preferred the lines do not cross.
 - (c) For left eye preferred the lines do not cross.
 - (d) All the above.
18. The typical quantitative test for stereopsis is?
- (a) The TNO
 - (b) The Random Dot tests.
 - (c) The Lang tests.
 - (d) All the above.
19. Which is not a qualitative Stereopsis test?
- (a) The TNO test.
 - (b) Both the Synoptophore, Random Dot test.
 - (c) The Random Dot Test.
 - (d) Synoptophore.
20. Which is not a quantitative Stereopsis test?
- (e) The TNO test.
 - (f) The Random Dot stereogram.
 - (g) The Titmus Fly Test
 - (h) The Lang Test.

Section B. Attempt all questions (20 Marks)

1. Explain briefly what the Maddox Rod is used for. [4 Marks]
2. Explain the term Stereopsis. [4 Marks]
3. Explain the term fusion. [4 Marks]
4. Explain the term visual acuity. [4 Marks]
5. What is the Worth-4-Dot test used for? [4 Marks]

SECTION C. Attempt any three questions. (60 MARKS)

1. Describe the anatomy and physiology of accommodation. [20 Marks]
2. Discuss the methods used to assess horizontal tropia. [20 Marks]
3. Define convergence insufficiency and possible management. [20 Marks]
4. Describe the various uses of the Major Amblyoscope and the expected results in each case. [20 Marks]

END OF PAPER