



## BRAINWARE UNIVERSITY

Term End Examination 2024-2025

Programme – M.Optomtry-2024

Course Name – Binocular Vision and Paediatric Optometry

Course Code - MOP10103

( Semester I )

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

### Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Choose correctly the state of power in which eyes is able to see two dissimilar objects simultaneously.
  - a) Simultaneous Macular perception
  - b) Fusion
  - c) Retinal rivalry
  - d) ARC
- (ii) State the condition which gives rise to retinal disparity.
  - a) ARC
  - b) Retinal rivalry
  - c) Suppression
  - d) Disparity
- (iii) Identify two vergence disorder.
  - a) AI and AE
  - b) AIF and Spasm of accommodation
  - c) CI and FVD
  - d) Presbyopia and paralysis of accommodation
- (iv) Cite the condition which is an active cortical inhibition of vision of one eye.
  - a) Confusion
  - b) Suppression
  - c) diplopia
  - d) Fusion
- (v) Choose corretly which is the carrier of principal visual direction.
  - a) Fovea
  - b) Optic nerve
  - c) Lens
  - d) Optic disc
- (vi) Choose the term which refers to the relative ordering of visual objects in depth.
  - a) Stereopsis
  - b) Simultaneous Macular perception
  - c) Fusion
  - d) Suppression
- (vii) Select the region in front and back of the horopter in which single vision is present.
  - a) Horopter
  - b) Retinal rivalry
  - c) Vieth muller cricle
  - d) Panum's area
- (viii) Select the condition which is treated with patching.
  - a) Amblyopia
  - b) Diplopia
  - c) Confusion
  - d) None of these

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- (ix) Select the condition which can be treated with Accommodative flipper.
- Accommodative excess
  - Accommodative infacility
  - Accommodative insufficiency
  - All of these
- (x) Select the condition which can be treated with cat card.
- Convergence insufficiency
  - Convergence excess
  - Basic exophoria
  - Basic esophoria
- (xi) Evaluate the characteristics that is NOT present in congenital nasolacrimal duct obstruction.
- Epiphora
  - Dacryocystitis
  - Mucopurulent discharge
  - Bilateral proptosis
- (xii) Evaluate the factor that is NOT typically included in the prenatal history during pediatric assessment.
- Maternal medical history.
  - Previous immunizations.
  - Pregnancy complications.
  - Birth weight.
- (xiii) Develop a strategy to manage diplopia in patients with intermittent exotropia. Which is the most effective approach?
- Correct refractive error and prescribe glasses
  - Use occlusion therapy for the dominant eye
  - Prism correction to eliminate diplopia
  - Suppress the vision of one eye permanently
- (xiv) Develop an effective intervention plan for a patient with diplopia caused by a recent acquired cranial nerve palsy.
- Prescribe anti-suppression therapy immediately
  - Utilize corrective prisms or occlusion therapy until spontaneous recovery
  - Recommend surgery to eliminate the double vision
  - Encourage prolonged monocular viewing to adapt to diplopia
- (xv) While evaluating the relationship between eccentric fixation and suppression in amblyopia, What would be the most reasonable conclusion?
- Suppression often leads to eccentric fixation in amblyopic eyes.
  - Eccentric fixation prevents suppression from occurring.
  - Both suppression and eccentric fixation have minimal impact on amblyopia
  - Suppression is unrelated to the development of eccentric fixation

**Group-B**  
(Short Answer Type Questions)

3 x 5=15

- Evaluate a case of Right inferior Rectus palsy using park's three step test. (3)
- Write the Gradient method for AC/A ratio calculations. (3)
- Summarize various signs of divergence insufficiency. (3)
- What role does suppression play in preventing diplopia in patients with strabismus? (3)
- Explain Fixation Disparity curve types and its clinical correlation with the conditions. (3)

OR

How can abnormal binocular vision conditions, such as amblyopia affect the development and functionality of stereopsis? (3)

**Group-C**  
(Long Answer Type Questions)

5 x 6=30

- Evaluate the role of suppression and abnormal retinal correspondence (ARC) in terms of their functional adaptation to strabismus and also explain Bagolini straited glass test for suppression and ARC detection. (5)
- Explain in details the MEM retinoscopy procedure. (5)
- Explain in details the Near retinoscopy procedure. (5)

10. During synoptophore assessment, if a patient responds, "I can see the picture of a bird" what would you suspect for this patient and why? (5)
11. Describe etiology, characteristic of sixth nerve palsy and also develop a management plan for the palsy. (5)
12. Emily Watson, an 8-year-old girl, was referred to our clinic for evaluation of congenital nystagmus. Her parents reported noticing involuntary eye movements in Emily since birth, which seemed to affect her ability to track objects smoothly. There was no family history of eye diseases or neurological conditions. Clinical Examination: Upon examination, Emily's visual acuity was 20/30 in both eyes without correction. Her eye movements showed characteristic horizontal pendular nystagmus, with equal amplitude in both eyes and no associated head turn or tilt. There were no signs of other ocular abnormalities or refractive errors. Develop your management plan for the patient. (5)

**OR**

Ethan Miller, a 10-year-old boy, was brought to our clinic by his parents due to concerns about his vision. They noticed that Ethan often complains of blurred vision, especially when trying to see distant objects such as classroom boards or street signs. His parents reported no family history of significant eye problems or refractive errors. Upon examination, Ethan's visual acuity was 20/20 in both eyes without correction. Her dry refraction shows -1.00 D in both eyes. Cycloplegic refraction revealed no significant refractive error in the distance. Develop your management plan for the case. (5)

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