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BRAINWARE UNIVERSITY

Term End Examination 2024-2025

Programme – B.Optomtry-2021/B.Optomtry-2022/B.Optomtry-2023

Course Name – Visual optics-II

Course Code - BOPTOC402

(Semester IV)

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) A child is presented with difficulty in seeing the blackboard in School. His teachers say that he frequently squeezes his eyes. Select the most probable cause is
 - a) Hypermetropia
 - b) Myopia
 - c) Presbyopia
 - d) None of these
- (ii) Identify the average image magnification reported by Spectacle correction
 - a) 0.05
 - b) 0.1
 - c) 0.33
 - d) 0.55
- (iii) Identify the working distance of MEM Retinoscopy
 - a) 20 cm
 - b) 40 cm
 - c) 60 cm
 - d) 1 m
- (iv) Select the amplitude of accommodation if the patient feels first sustain blur at 10 cm with RAF ruler
 - a) 4D
 - b) 10 D
 - c) 16D
 - d) 1 D
- (v) Choose the color of pupil in case of aphakia
 - a) Jet Black
 - b) Black
 - c) White
 - d) Grey
- (vi) Select the eye drop work as only mydriatic
 - a) Atropine sulphate
 - b) Homatropine-hydrobromide
 - c) Cyclopentolate hydrochloride
 - d) Phenylephrine
- (vii) A 15 years old patient is presented with difficulty in seeing the black board but there is no difficulty in books reading. Select the most probable cause is
 - a) Hypermetropia
 - b) Myopia
 - c) Presbyopia
 - d) None of these
- (viii) Identify the correct statement for duochrome test where we have to add more plus

- a) Red Clearer
 - b) Green clearer
 - c) Red, Green equal
 - d) All of these
- (ix) Select the result of 1 mm increasing of the anteroposterior diameter
- a) 1D Hypermetropia
 - b) 3D Hypermetropia
 - c) 1D Myopia
 - d) 3D Myopia
- (x) Identify the correct statement for duochrome test where we have to add more minus power
- a) Red Clearer
 - b) Green clearer
 - c) Red, Green equal
 - d) All of these
- (xi) Select the ocular refraction value if the spectacle refraction value is -4.25 D
- a) -4.00D
 - b) -3.00 D
 - c) -5.00 D
 - d) None of these
- (xii) Choose the result of shortening of anteroposterior length of the eyeball
- a) Hypermetropia
 - b) Myopia
 - c) Presbyopia
 - d) Astigmatism
- (xiii) Choose the type of hypermetropia cannot be corrected by tone of the ciliary muscle
- a) Latent
 - b) Manifest
 - c) Facultative
 - d) Absolute
- (xiv) Identify the correct statement if result of the duochrome test is red clearer
- a) need to add plus more
 - b) need to add minus more
 - c) need to add prism
 - d) None of these
- (xv) Select the type of convergence we can use while we are mainly focusing at distance
- a) Fusional Convergence
 - b) Accommodative Convergence
 - c) Proximal convergence
 - d) Voluntary Convergence

Group-B

(Short Answer Type Questions)

$$3 \times 5 = 15$$

2. Classify regular astigmatism based on axis and angle. (3)
3. How we can assess NPA by the minus lens method. (3)
4. Discuss spectacle refraction and ocular refraction. (3)
5. Describe with-the-rule astigmatism with an example. (3)
6. One 50 years old patient come to your clinic, he is a farmer by occupation. he is facing difficulty with near work. what type of correction you will suggest and explain why? (3)

OR

One 45 years old patient come to your clinic. he is facing difficulty with near work with his (3)
contact lens. He is a film artist by profession. What will be the possible diagnosis, what type
of correction you will suggest and explain why?

Group-C

(Long Answer Type Questions)

 $5 \times 6 = 30$

7. Describe one method of measuring of NPC. (5)
8. Explain clinical types of anisometropia. (5)
9. Suppose you went on a camp and there you do not have any retinoscope or autorefractometer but you have digital visual acuity system and trial box. Their 5 patients are waiting for glass prescription. Explain how you will assess those patients and explain any one procedure in details. (5)
10. One patient came to your clinic and complained of double vision, as per history he is the first time spectacle user since 2 days and the patient doesn't have any kind of ocular deviation. Explain how you will investigate this case and what can be the possible diagnosis. (5)
11. Explain the optics of retinoscopy. (5)

12. One 50 years old patient come to your clinic, he is a librarian by profession. he is facing difficulty with near work. How you will assess this case? What will be the possible diagnosis, what type of correction you will suggest and explain why? (5)

OR

Explain why we consider +0.75D value on MEM as normal. (5)

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