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

B.OPTOMETRY DEGREE EXAMINATION – September 2021
Second Year

OPTOMETRIC INSTRUMENTS AND CLINICAL EXAMINATION OF VISUAL SYSTEM

Time: Three hours   Maximum: 80 marks

I Choose the best answer   (10 x 1 = 10)

1. Which condition causes sudden painful loss of vision
   a) Central retinal artery occlusion
   b) Massive vitreous haemorrhage
   c) Ischemic central retinal vein occlusion
   d) Acute congestive glaucoma

2. All the following are reliability indices in perimetry EXCEPT
   a) Fixation losses   b) Test strategy
   c) False positives   d) False negative

3. "a" wave in ERG is
   a)A negative wave   b) A positive wave
   c) Arises from muller cells   d) Contains photon

4. The principle used in Sheridian Gardiner test is
   a) Confusion   b) Rotation
   c) Matching   d) Distribution

5. Cat Card is used to train
   a) Convergence Insufficiency   b) Divergence Insufficiency
   c) Divergence Excess   d) Convergence Excess

6. Balie Lovie charts have
   a)Arithmetic progression   b) Geometric progression
   c) Logarithmic progression   d) Binomial progression

7. NIBUT can be measured using
   a) Schirmers   b) Fluroscein strip
   c) Lisamine green stain   d) Keratometer

8. Macular densitometer tests
   a) Colour vision   b) Visual field
   c) Contrast sensitivity   d) Glare sensitivity

9. Primary function of lateral rectus is
   a) Elevation   b) Adduction
   c) Abduction   d) Suppression

10. A _____ reflex is seen in keratoconus
    a) Against   b) With
    c) Neutral   d) Scissors

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

1. Nyctalopia is seen in Vitamin A deficiency.
2. In abnormal head posture the head is turned in the direction opposite to the action of paralysed muscle to avoid diplopia.
3. Swedish interactive Threshold Alogarithm is a strategy of threshold testing.
4. Cells and flares are best seen in retroillumination.
5. Hirschberg test is used to measure latent deviation.
6. History of consanguinity is an important question for RP patients.
7. Retinal Nerve fibre analyser is based on scanning laser polarimetry.
8. Regurgitation On Pressure from Lacrimal Sac Area is done generally before doing a potential acuity meter.
9. A trial case incorporates prism of greater than 20 prisms for detecting deviations.
10. A Wollaston prism is used in fundus camera.

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

1. Seeing distorted shapes of objects in called _____.
2. _____ lens is a planoconcave lens with dioptric power 58.6D
3. Normal blink rate is _____.
4. "A" in A scan stands for _____.
5. Applanation tonometry is based on _____ raw.
6. The image formed by a _____ ophthalmoscope is virtual and erect.
7. _____ is a combination of two cylindrical lenses of equal strength but with opposite sign placed with their axis at right angles to each other and mounted in a handle.
8. _____ is absent in congenital ptosis.
9. A manual lensometer is based on ____ principle.
10. _____ retinoscopes produce an elongated image of their line filament bulb, which can be rotated through 360º

IV Write any **FIVE** answers of the following: (5 x 6 = 30)

1. Illustrate the optics of a Bausch and Lomb keratometer.
2. Write on various colour vision tests and its principles.
3. Illustrate and explain the optics of a direct ophthalmoscope.
4. Write on reliability indices of Humphrey field analyser.
5. What is indentation and applanation tonometry? Gives examples for each.
6. Various illumination techniques in slit lamp.
7. What is the principle of B scan and UBM? List their use.

V Write any **TWO** essays of the following: (2 x 10 = 20)
1. Compare and contrast Snellen and log MAR visual acuity testing methods and principles.
2. What are the three grades of binocular single vision? How does a synaptophore test them? What are home devices that can help in training BSV?
3. How does history taking provide steps towards diagnosing a condition? Give reasons with history taking questions generally asked and their justification.

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