

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

**B.OPTOMETRY DEGREE EXAMINATION – March 2019**  
**Second Year**

**OPTOMETRIC INSTRUMENTS AND CLINICAL EXAMINATIONS**  
**OF VISUAL SYSTEM**

Time: Three hours

Maximum: 80 marks

**I. Choose the best answer:** (10 x 1 = 10)

1. Pupillometer is used to measure
  - a) IPD
  - b) GCS
  - c) Nose Bridge
  - d) Spectacle centration
2. \_\_\_\_\_ which states IOP equals force on the cornea to the area indented or applanated.
  - a) Imbert Fick Law
  - b) Thumbs Law
  - c) Indentation Law
  - d) Malus Law
3. Retinoscopy works on a principle called
  - a) Schineir
  - b) Foucault
  - c) Badal
  - d) Archimedes
4. Ishihara test is based on
  - a) Color matching
  - b) Color confusion
  - c) Color coding
  - d) Hue discrimination
5. 1M unit equals
  - a) N5
  - b) N4
  - c) N8
  - d) N6
6. Aqueous flare is best seen with
  - a) Paralloiped illumination
  - b) Conical Beam
  - c) Transillumination
  - d) Retroillumination
7. A in A-scan stands for
  - a) Axial length
  - b) Aplanatic
  - c) A single
  - d) Amplitude
8. The following are characteristics of retinoscopic reflex EXCEPT
  - a) Brilliance
  - b) Width
  - c) Slit
  - d) Speed
9. The middle mirror in goldmann three mirror lens is inclined at
  - a) 67°
  - b) 57°
  - c) 35°
  - d) 45°

10. "F" in FOLDARG stands for

- a) Frequency
- b) Family
- c) Feeling
- d) Fusiform layer

**II. Fill in the blanks:**

(10 x 1 = 10)

1. Red filter is used to observe \_\_\_\_\_.
2. Videokeratoscope uses corneal \_\_\_\_\_ as mirror.
3. SWAP stands for \_\_\_\_\_.
4. Each letter in log MAR represents \_\_\_\_\_ log units.
5. \_\_\_\_\_ is called as the absence of lens.
6. \_\_\_\_\_ is used to check for glare.
7. A grade of ACD I in van Herrick is called as \_\_\_\_\_ angle.
8. Swinging flash light test helps to detect \_\_\_\_\_.
9. TBUT stands for \_\_\_\_\_.
10. A \_\_\_\_\_ is an optical device for presenting one image to one eye and another image to other eye.

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

1. Placido's ring uses the reflection property of cornea.
2. A 6/6 target subtends 5 min arc AT 6 m.
3. Pachymeter and anterior scan – OCT are used to measure corneal thickness.
4. Simultaneous macular perception is grade II of BSV.
5. Defects in iris can be seen through retro illumination.
6. GDx is based on birefringence of nerve fibre layer.
7. Exophthalmometer is used to evaluate ectropion.
8. Distometer helps to measure corneal curvature.
9. Pentacam is based on the Scheimpflug principle.
10. Bausch & Lomb keratometer has Wollaston prism.

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

(5 x 6 = 30)

1. Compare and contrast a direct and indirect ophthalmoscope.
2. Illustrate and explain the optics of a manual lensometer.
3. Corneal topography measurements.
4. Write on headache history and birth history.
5. Write on pediatric visual acuity charts.
6. Write on (a). APGAR score (b). CSM (c). ROPLAS.
7. Write on the reliability indices of a Humphrey visual field analyser.

**V. Write any TWO essays of the following:**

(2 x 10 = 20)

1. Write in detail about various slit lamp techniques and what are they used for.
2. Write on all macular function tests.
3. Write on (a). Unilateral cover test (b). Alternate cover test (c). Illustrate the cover test findings if the right eye had exotropia.

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