

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

B.OPTOMETRY DEGREE EXAMINATION – August 2018
Second Year

OPTOMETRIC OPTICS

Time: Three hours

Maximum: 80 marks

I Choose the best answer

(10 x 1 = 10)

1. Unintended coloration in a medium is called as
 - a) colouring
 - b) Grayness
 - c) Tarnish
 - d) All the above
2. A cord is a
 - a) Heavy vein
 - b) Fine vein
 - c) Both a and b
 - d) None of the above
3. Which of the following defect cannot be found by transmission technique?
 - a) Bad metal
 - b) Veins
 - c) Bubbles
 - d) Feathers
4. For +4.00 D add power, near Pd should be measured at
 - a) 40cm
 - b) 20cm
 - c) 25cm
 - d) 30cm
5. Laager the frame difference _____ the lens shape
 - a) Rounder
 - b) More squared off
 - c) Narrower
 - d) Wider
6. What is the geometric center distance of a frame marked 52 □ 17?
 - a) 52
 - b) 60.5
 - c) 69
 - d) 72
7. The color of a frame with gold in it depends on
 - a) Quality of gold used
 - b) Quantity of gold used
 - c) Kind of metal used to make the alloy
 - d) All the above
8. _____ has no metal in other than chemically pure gold?
 - a) Fine gold
 - b) Gold filled
 - c) Gold filled
 - d) All the above
9. Near PD for bifocals with high plus correction should be
 - a) Increased slightly over the measured value
 - b) Decreased slightly over the measured value
 - c) Left the same as the measured value
 - d) None of the above
10. _____ should be used for fitting high minus wearer
 - a) Rounded corner
 - b) Large lenses
 - c) Crown glass lenses
 - d) None of the above

(p.t.o)

-- (2) --

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

1. The word 'lens' is derived from the latin word for a 'lentil seed'
2. Highest surface power in any form is known as base curve
3. Best form spherical lens is completely free of aberrations
4. Follow tool is needed for working concave surfaces
5. Two cylinder placed with their axes parallel to each other can be replaced by a single cylinder of power equal to the sum of two cylinder power
6. Movement of the optical center is called as decentration
7. Truing is the process by which blank is brought to its approximate curvature
8. Strain is a type of fault in the surface of the lens
9. Effector power of positive lens increases if it is moved away from the eye
10. Toughened lenses protect the glasses from chemical agents

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

1. High refraction index materials can yield _____ lenses
2. Genera lens measure is used for _____
3. _____ axis of a tonic lens represents the meridian of greatest thickness
4. Power if the prism is expressed in terms of _____
5. Deviating power of a lens at any given point is called its _____
6. Refractive index of polycarbonate is _____
7. Abbe number of PMMA is _____
8. Optic centre of the distance lens and near lens lies in a same plane in a _____ bifocal
9. _____ material is light weight strong and corrosion resistant
10. _____ material is light weight durable and highly corrosive

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

1. Write in brief about rotation test
2. Explain with examples about different forms of lenses
3. Write note on lens surfacing
4. Explain with example about, compounding and resolving prisms
5. Draw a diagram and give notes on parts of a frame
6. Write notes on anti reflection coating
7. List the characteristics of tinted lenses

V Write any **TWO** essays of the following: (2 x 10 = 20)

1. Discuss about the various notations used to specify the axis direction of astigmatic lenses, with diagram
2. What are the optical requirements of bifocals?
3. Discuss about the faults in the material of lens

(Sl.No. M19242)