Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Sc. Optometry Degree Examination - 19-Nov-2024

Time: Three Hours **Max. Marks: 80 Marks**

OPTOMETRICS OPTICS – (RS-3)

Q.P. CODE: 3111

Your answers should be specific to the questions asked
Draw neat, labeled diagrams wherever necessary

LONG ESSAYS (Answer Any Three) **3 x 10 = 30 Marks**

1. Write a note on Lenticular lenses.
2. Draw a neat labeled diagram of Boxing system.
3. What is Progressive add lenses? Explain in brief about designs of PAL's.
4. Use the formula method to find the resultant spherocylinder lens power when these two obliquely crossed spherocylinder lenses are combined.
   -1.00-2.00 x 20
   -2.50-3.00 x 80

SHORT ESSAYS (Answer Any Six) **6 x 5 = 30 Marks**

5. Write a short note on selecting frame for high minus.
6. Write a short note on Polarizing lenses.
7. Draw a neat labeled diagram of Frame and explain each parts of Frame.
8. Derive sag formula.
9. What is the theory of AR coating?
10. What is the prismatic effect at a point 8mm below and 3mm inwards from the optical centre of the LE lens -2.00DS -1.50DC x 90?
11. Write a short note on the forms of lenses.

SHORT ANSWERS **10 x 2 = 20 Marks**

12. Name any two lens material defect observed through transmission technique.
13. What is the reflectance of a lens material with a RI of 1.60?
14. What is a cylindrical lens?
15. What are the advantage and disadvantage of bifocal lenses?
16. What are the advantage of progressive add lenses?
17. Write the simple transposition and cross cylinder form of -1.00DS -1.75DC x 90.
18. What is the difference between segment height and segment depth?
19. A lens surface has a refractive power of +8.25 D. If the lens is made from material having an index of 1.74, what is the radius of curvature of the lens surface?
20. A frame is marked 50 □ 18. The lens shape is round. What is the effective diameter of the lens?
21. Give two disadvantage of Canada balsam.

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