Avinashilingam Institute for Home Science and Higher Education for women
Coimbatore -641043
Continuous Internal Assessment I FEBRUARY-2025
IV Semester

Class: II UG **Time: 2 Hours**
Branch : Optometry **Max Marks: 60**

22BOPC19 - Optometric Optics - II

Course Outcomes:
CO1: To gain knowledge on multifocal lenses.
CO2: To understand effects, units, base – apex notation, prismatic effect of Ophthalmic prisms.
CO3: To acquire knowledge on special lenses and lens enhancement coatings.
CO4: To understand high index lenses and aberration of ophthalmic lenses in detail.
CO5: To understand the spectacle frame – manufacturing and their materials

Part A **6 × 1= 6**

Choose the Correct Answer

1. Which of the following is a manufacturing method for bifocal lenses? **CO1K1**
a) Fused b) Cemented c) Solid d) All of the above
2. What is the primary advantage of PALs over traditional bifocals? **CO1K1**
a) Lower cost b) No need for adaptation c) Smoother transition between vision zones
d) Stronger magnification
3. What is the unit of measurement for prism power? **CO2K1**
a) Diopters (D) b) Prism Diopters (Δ) c) Millimeters (mm) d) Centimeters (cm)
4.In base-apex notation, which edge of the prism is considered the "base"? **CO2K2**
a) thinner edge b) thicker edge c) center of the prism d) edge facing the patient
5.What is the main characteristic of Fresnel lenses? **CO3K1**
a) Extremely high refractive index b) Lightweight and thin profile
c) Designed to correct aniseikonia d) Used for cosmetic purposes
6. Spectacle magnifiers are primarily used for: **CO3K1**
a) Correcting distance vision b) Improving near vision tasks c) Reducing glare
d) Enhancing peripheral vision

Part B **3× 6= 18**

Answer ALL the questions

Each answer should not exceed 400 words or two pages

7.A. Describe Fresnel lenses & Prisms. **CO3K1**
7.B. Differentiate b/w symmetrical & asymmetrical lenses , mention the pros&cons. **CO1K2**
8.A. Describe Spectacle magnifiers &Recumbent prisms**.** **CO3K1**
8.B. Solve out .If a prism has an apical angle of 8 degrees and is made from CR-39 plastic with refractive index of 1.498.How many degrees will the prism deviates the light ray from its original path? **CO2K3**
9.A. Define prentice rule ,If lens having a power of +3.00D is decentred 5mm away from the centre of eye.How much prismatic effect will it cause?. **CO2K1**
9.B. Define PAL ,types and pros & cons of PAL. **CO1K1**

Part C **3× 12= 36**

Answer ALL the questions

Each answer should not exceed 800 words or four pages

10.A. Describe Bifocal and types and fitting . **CO1K1**

10.B.Define prism, units and solve , If a prism has an apical angle of 10 degrees and is made from CR-39 plastic with refractive index of 1.498.How many degrees will the prism deviates the light ray from its original path? **CO2K1**

11.A.Summarize Progressive additional lenses**.** **CO1K2**

11.B.Enumerate a note on special lenses. **CO3K1**

12.A. Discuss about High Refractive index glasses & Aniseikonia lenses. **CO3K2**

12.B.Describe about the Compounding and Resolving Prisms. **CO2K1**

18 Copies **Staff: Ms. Nandhini.G**