LOW VISION AND DISPENCING OPTICS
QUESTION BANK

PREPARED BY,
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Essay (10 marks)

01. Treatment option for low vision in a patient with diabetic retinopathy.
02. Explain the various types of frame materials.
03. Explain the optical and non-optical aids used in low vision care. Compare Galilean and Keplarian telescopes.
04. Clinical evaluate near vision patients. What is Amsler's grid and mention its types.
05. What are the field defects.
06. Define low vision. What are the ways to determine the magnification required for the patient.
07. Explain in detail about optical and non-optical low vision devices.
08. Define low vision. Write about the identification, diagnostic procedure, causes and refraction done in low vision patients. Explain in detail.
09. Explain the various processes involves in surfacing and polishing of glasses. Explain the methods in inspection of faults in lenses.
10. What are the different types of faults in lenses and how would you inspect it
11. Enumerate common disorders leading to low vision. Describe in details about problems and management of the following conditions.
    a. Corneal opacity • Albinism • Macular degeneration
12. Write in details about spectacle lens manufacturing.
13. Write in detail about frame selection
14. Discuss the types and significance of optical and non-optical aids used for low vision Enhancement
15. Draw a neat and labeled diagram of a standard frame. Illustrate with diagram different types of Nose Bridge, temples and bends.
16. Define low vision. How would you take the history of low vision patient. What precaution will you take while designing a low vision clinic. Define the procedure for visual acuity testing for low vision.
17. Discuss the various faults seen on the lens surface during manufacturing of lenses.
18. Elaborate on the different special purpose spectacle frames with its indications.
19. Enumerate common disorders leading to low vision and describe in detail on problems and management in albinism, optic atrophy and glaucoma
20. Compare spectacle magnifier, hand magnifier and stand magnifier in terms of advantages and disadvantages. Briefly explain the clinical features and low vision management of albinism
21. Describe history taking of low vision patient in detail. Discuss low vision evaluation in terms of refraction, distance & near vision and visual field
22. Describe the various lens faults associated with lens material and lens surface. Add a note on lens faults inspection

Short notes (5 marks)

23. Explain the advantages of high index lenses
24. Low vision management for ARMD
25. Spectacle frame selection for children
26. Non-optical devices in low vision care
27. Draw and discuss Amsler testing
28. Inspection of faults of lenses
29. Steps in glazing
30. Types of faces and the choice of frames
31. Frame measurement and frame selection for elderly
32. Spectacle magnifier
33. Bifocal spectacle lens fitting
34. Spectacle dispensing in myopia
35. Types of frames
36. What are the processes involved in surfacing and polishing of glass lenses
37. Methods involved in inspection of faults in lenses
38. Standard alignment of frames.
39. Construction and uses of Amsler chart
40. Define and classify magnification. Describe briefly on stand magnifiers
41. Mention types of bifocal and explain in detail about Kryptok and D bifocal
42. Polycarbonate material
43. Differences between RGP and soft lenses.
44. Non optical devices used for low vision patients.
45. Telescope and its advantage and disadvantage
46. Abbe value
47. Galilean vs Keplarian telescope
48. Different types of pliers
49. How do you measure inter pupillary distance.
50. Inter papillary distance measurement
51. History taking in low vision
52. Advantages of high index lenses
53. Non optical devises in low vision management.
54. Low vision evaluation
55. What are the different types of temples draw the diagram with its specifications.
56. What are the optical ad non-optical devices, list any five in each group.
57. What is the water mark in progressive lens, what is its significance.
58. Differentiate between coated and tinted lenses.
59. Briefly mention different types of non optical aids and their significance.
60. Fitting of progressive lenses
61. Measurements for progressive addition lenses
62. Low vision care in children

63. Boxing system
64. Steps in selecting low vision aids
65. Inter pupillary distance measurements
66. Advantages and disadvantages of CCTV
67. Lens and frame markings
68. Steps in hand neutralization
69. Describe on various special filters used in ophthalmic lens dispensing.
70. Elaborate on ANSI standards.
71. Explain refraction in low vision patients
72. Frame measurement
73. What are the mechanical properties of spectacle lenses.
74. Describe casting and moulding in spectacle lens production

Answer briefly (2 marks)

75. Explain the power, axis, and centration aspect of lens quality.
76. Explain the following lens defects: ● Veins ● Bubbles ● Waves
77. Contrast sensitivity assessment in low vision patients
78. Geneva lens measure
79. Edging of lenses for rimless frames
80. Facial measurements in children for spectacle lenses
81. RGP static fit assessment
82. Different techniques of inspecting a spectacle lens surface.
83. Low vision management for retinitis pigmentosa
84. Edging of lenses for metal frames
85. Polaroid lenses
86. Stand magnifier
87. Refraction in low vision patients
88. Boxing system
89. Definitions for low vision and blindness
90. Polishing of spectacle lenses
91. Distance and near vision assessment in low vision patients
92. Parts of frame
93. Classification of spectacle frames based on temple position
94. Mobility assistive devices for low vision patients
95. Frame adjustments for PAL
96. Common spectacle lens defects
97. Frame selection for high myopic patients
98. Edging of rimless frames
99. IPD measurement in bifocal fitting
100. Academic considerations for a low vision child

101. What are the various optical devices used for a low vision patient
102. Cellulose acetate
103. Monel & nickel
104. What are the different facial shapes
105. List the various lens design
106. Amsler grid chart.
107. Edging.
108. Pliers.
109. Abbe value.
110. What are the various solvents used in joining plastic frames
111. Crest angle
112. Define low vision and classify low vision.
113. Define spectacle magnification. Explain the magnification produced by a spectacle
114. Magnifier for an object placed at the anterior principal focus of the lens
115. Name any five complications of soft contact lens
116. Define sagittal depth and height
117. DIFFERENTIATE FLINT AND CROWN GLASSES.
118. Define spherical aberration and how can you minimize the spherical aberration
119. Working definition of low vision
120. Any one method of optic centre marking
121. Non optical aids
122. Magnification for near
123. Importance of history taking in low vision clinic
124. Any three indications for special lenses
125. List down the advantages of aspheric lenses
126. Name the properties of ophthalmic lens material
127. Define low vision
128. Difference between bifocal and progressive addition lenses
129. Uses of stand magnifier
130. Side shields
131. List four prescribing aspects of low vision devises.
132. Importance of optical centre marking
133. Define visual impairment
134. Advantages of D-bifocals
135. Suggest frame shapes for oval and diamond faces
136. Indications for special lenses
137. Advantages and disadvantages of hand magnifiers
138. Mention two advantages of logmar chart over Snellen acuity chart.
139. Explain Distometer.
140. Name the metal frame materials
141. Facial wrap
142. How will you hand neutralize plus spherical lens.

143. “Retinitis pigmentosa patient with visual acuity 6/9 visual field 10 degrees is a low vision patient”. Can you support this statement.
144. Why do we explain first time bifocal wearer not to walk downstairs without prior practice of wearing the bifocals at home.
145. What is legal blindness.
146. If a low vision patient reads 6/24 for the distance with his right eye, calculate his near correction.
147. What type of tint will benefit for the patient with albinism.
148. How does geometric centre and optic centre differes.
149. Transpose the following -2.00x10/ + 0.50 x 100 to spherocylinder form.
150. What do you know by ptosis crutches.
151. Uses of bar reader
152. WHO classification of low vision
153. Radical retinoscopy
154. Advantages of stand magnifier
155. Discuss on Abbe value.
156. What are crutch glasses.
157. Explain the categories of low vision.
158. Define low vision
159. Significance of crutch glasses
160. Importance of pantoscopic tilt
161. List the frame accessories
162. Galelian Vs Keplarian telescopes
163. List ocular disorders leading to loss of peripheral field.
164. Differentiate between soft and hard design of PAL
165. Advantages and disadvantages of hand magnifier
166. Eccentric fixation vs eccentric viewing
167. List the errors during Interpupillary.distance measurement
168. Contrast sensitivity charts
169. Compounds used for lens polishing
170. What is LARS and where will you apply
171. Name the methods of inspecting the quality of lenses
172. Define modulus of elasticity and give with example of any two commercially available lenses
173. List down any four optical devices
174. Define refractive index and abbe value
175. How to demonstrate stand magnifiers to patients
176. Advantages of E-style bifocals
177. Low vision aids for field defects
178. Uses of Galilean telescope.
179. What is frame front
180. Polycarbonate
181. Types of bridges with diagram

182. Nylon and optyl
183. Spectacle magnifier
184. History taking in low vision patients
185. Boxing system
186. CCTV magnifier
187. List the various plastic frame materials
188. Identifying the low vision patients
189. Draw the various temple designs
190. What are artificial eyes
191. What are the various lens types. Explain each type.
192. List the various types of electronic devices used for low vision patients.
193. What is glazing
194. Glazing of spectacle lens
195. Absorptive lenses
196. Instructional sequences for telescope use in low vision care
197. Diffuse and retro-illumination technique using slit lamp
198. Frame manipulation
199. Faults in spectacle lens fitting
200. Considerations while edging of lenses for plastic frames

One word answer (1 marks)

201. Write sphero cylindrical combination of +2.00 DC @ 90 ,+3.75 DC @ 180
202. List two uses of industrial safety glasses
203. Decentration of optic centre leads to ----------
204. Plus lens causes ..... Distortion
205. Polarizing lenses reduces .....Glare
206. Chromatic aberration increases when Abbe value .....
207. ANSI stands for .....
208. Bifocal height is the distance between the --------
209. State two uses of typoscopes
210. Refractive index of Butyl Styrene is _____
211. _____ B size frames are not suitable for high hypermetropic prescriptions.
212. _____scotoma is seen in high plus lenses.
213. _____ determines the depth of the reading portion.
214. Visual acuity of less than -------- is called as low vision
215. State the use of typoscopes
216. The instrument used to measure spectacle lens power is ---------
217. ANSI stands for ----------
218. Color vision increases in diseases of macula like ARMD.
219. Common method of tinting plastic lenses is dipping
220. Magic software is used for blind people.

221. In spectacle frame shaft is the portion of temple between butt and bend portion.
222. Stand magnifiers are preferred to prescribe for the purpose of continuous reading.
223. Polycarbonate has the _____ abbe value among all plastic materials.
224. During slit lamp examination, _____ is seen in keratoconus.
225. _____ can be given for low vision patients for driving.
226. The distance between the back surface of the spectacle lens and the cornea is _____.
227. _____ to reduce ring reflections in high minus prescriptions.
228. Name the type of temple recommended for children ----------
229. Eccentric fixation is a natural phenomenon to adapt for patient with glaucoma.
230. Conture bend can be safely given to active sports personell.
231. Amsler grid can be performed for patient with macular oedema.
232. In spectacle frame bridge joins two eye size.
233. Notex is used to identify Indian rupee.true/false
234. Jack in the box phenomenon is usually seen with high minus lens.true/false
235. -2.00/-1.00 x 90 is same as -3.00/-1.00 x90 true/false
236. The eye size bridge and temple measurements are normally seen in the inner side of temple of the frame. True/false
237. Legal blindness refers to best corrected visual acuity less than 6/60 in the better eye true/false
238. ..... Temple is suitable for children with physical disabilities
239. ..... Measures the corneal curvature
240. An increase in endothelial cell size is termed as .....
241. ..... Is the commonest cause of low vision
242. Blurring of vision immediately after blink indicates ..... Fit
243. Patient reading 6/9 with central vision 10 degrees around the fixation can be considered low vision patient, according to WHO definition of low vision.
244. The refractive index of crown glass is .....
245. Blisters on the lens surface is called .....
246. Virtual image is produced by ..... Telescope
247. Vision clears immediately after blink in ..... Fitting lenses
248. The angled edge of a spectacle lens is called .....
249. ..... Lenses has a refractive index of 1.590
250. Name one FDA group-II lens
251. Define extended wear lenses
252. Drysdale principle is used to measure.....
253. The horizontal visible iris diameter is .....
254. A telescope is used by an uncorrected myope to see a distant object to see clear image, the myope will have to.....the tube length of the telescope
255. In grinding the lens are milled with a..... To give its thickness and radii of curvature.
256. ..... Connects the frame front to the temple and allows the temple to swing.
257. .....indicates the ability of a lens material to purely refract white light without chromatic aberration.

258. According to Kestenbaum rule, ---------- would be the required starting near addition for a patient whose distance acuity is 20/100
259. ---------- is the abbe value of CR-39
260. In---------- bifocal, near segment is of the same size as distance segment.
261. ---------- is the prismatic effect at a point 6mm below the optical centre of a +5.00 D
262. Lens
263. ..... Are recommended for round face.
264. Spectacle magnifier is .....
265. What is the name of instrument to measure vertex distance
266. "Refractive index of poly carbonate lens is ------
267. The portion of the temple that is nearest its attachment to the front is known as.....
268. ..... Technology is used to make anti-scratch lens
269. Abbe value of polycarbonate is .....
270. The distance between back surface of spectacle lens to the front surface of cornea is called.....
271. Notex is a .....device.
272. .....is used to detect visual field defects in low vision patients.
273. Enlargement of an object is dependent on the ..... Of the lens
274. During normal closed eye sleep the cornea swells by an average of
    a. 0 percent • 2 percent • 4 percent • 20 percent
275. CR-39 has a refractive index of .....
276. Trivex lenses are recommended for .....
277. Tweezers are used for ..... Adjustments
278. ..... Are fitted 2 mm smaller than the corneal diameter
279. Abbe value of CR39 is .....
280. .....frame is suitable for long face.
281. Library temple is also called as .....
282. In low vision patients, the visual acuity of the better eye is less than .....
283. When media opacity is present, ... Retinoscopy is done.
284. --------- is the least normal time of tear break up
285. ..... Defect in the spectacle lens material is commonly found during the inspection with shadowing technique
286. Amsler's chart covering an area of ----------
287. ---------- is the lenticular astigmatism in an eye with subjective refraction -3.00/-4.00× 90° and Keratometry readings 44.00/47.00@180°
288. ---------- cranial nerve is responsible for corneal innervations
289. Frames marked with Z87 means ----------
290. CC TV is ---------- type of Low Vision Aids
291. ---------- is the lenticular astigmatism in an eye with subjective refraction -5.00/-5.00× 180° and keratometry readings 44.00/46.00@90°
292. In albinism, reduced visual acuity is due to .....

293. Cellulose nitrate is not used as a frame material now, because of its ..... Nature