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BACHELOR OF CLINICAL OPTOMETRY
II-B. Optometry Sem-III : WINTER- 2022
SUBJECT : DISPENSING OPTICS - II (T)

Day : Tuesday

Time : 10:00 AM-01:00 PM

Date : 13-12-2022

W-837-2022

Max. Marks : 20

N.B :

Section – A is given on a **SEPARATE** sheet and has to be answered on the **SAME** sheet. This sheet should be completed within the first **30** minutes of starting of the examination. This sheet with Section – A only will be collected by Supervisors.

Seat No. : _____

SECTION – A

Q.1 Fill in the blanks : **(10)**

- a) _____ instrument is used to measure head and eye movement.
- b) Image jump is absent in case of _____ bifocal.
- c) Vogel's formula for minus lenses in _____.
- d) Nasal hidden engraving of PAL indicates _____.
- e) Vertex distance is measured with _____.
- f) Effective diameter is _____
_____.
- g) _____ is an example of occupational PAL.
- h) Distortion can be reduced by _____.
- i) 10KGF1/20 52□18 marking on frame describe as _____
_____.
- j) A polarizing ophthalmic lens should be oriented so as to eliminate _____ vibrating waves.

P.T.O.

Q.2 Match the following **(05)**

- | | |
|--------------------|---------------------|
| 1) Glass | i) Silver halide |
| 2) Polycarbonate | ii) High abbe value |
| 3) CR-39 | iii) Reduces glare |
| 4) Photochromics | iv) Scratches |
| 5) Poloroid lenses | v) Bullet proof |

Q.3 State **True** or **False** (If false give reason) **(05)**

- a) All cylindrical lenses are toric but all toric lenses not cylindrical.

- b) Faded state of photochromics blocks UV rays.

- c) Longitudinal chromatic aberration is also known as axial chromatic aberration.

- d) The lesser the curve variation factor the lesser is the thickness of the lens.

- e) Flat top bifocal lenses are fitted with segment top at the ciliary line.

Total Marks Obtained : _____

Signature of the Invigilator : _____

Signature of the Examiner : _____

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Max. Marks : 50

N.B.:

- 1) There are Three sections as
Section -A = Objective Type questions **20 Marks.**
Section -B = Long Answer Questions **20 Marks.**
Section -C = Short Answer Questions **20 Marks.**
- 2) Section A is given on a **SEPARATE** sheet and has to be answered on the same sheet. This sheet should be completed with the first 30 minutes of starting of the examination. This sheet with Section-A only will be collected by the supervisor.
- 3) Section B has three long questions and **Any TWO** questions have to be answered on the separate answer sheet.
- 4) Section C has six short questions and **Any FIVE** questions have to be answered on the separate answer sheet.
- 5) Draw neat labeled diagrams **WHEREVER** necessary.

SECTION – B

Q.4 Answer **ANY TWO** of the following **(20)**

- a) What is progressive additional lenses? Write in detail about various designs of PALs with advantages and disadvantages of each.
- b) Explain which type of bifocal is best for +5.00DS lens. With the help of example compare it with other types of bifocals.
- c) Describe in detail about best form lenses.

SECTION – C

Q.5 Answer **ANY FIVE** of the following: **(30)**

- a) Write about the indications and contraindication of poloroid lenses and how will you identify poloroid lenses?
- b) Explain curve variation factor with example.
- c) Explain shortly:
 - i) Drop ball test
 - ii) Prism thinning
- d) Explain the process of lens surfacing.
- e) Write about the different manufacturing techniques of organic photochromic lenses.
- f) Compare the optical and mechanical properties of following materials:
 - i) Trivex
 - ii) MR8
 - iii) Polycarbonate