

(ENGLISH)

[TIME ALLOWED—3 HOURS]

(MARKS—100)

SPECTACLES MAKING AND DISPENSING OPTICS (THEORY-III)**Marks**

1. (a) Multiple choice question (any five) :— 5
- (i) instrument is used to measure vertex distance.
 - (a) Polarimeter (b) Distometer
 - (c) Lensometer (d) Autorefractometer.
 - (ii) When light passes through a prism it
 - (a) bends towards apex (b) bends towards base
 - (c) bends towards object (d) does not bend.
 - (iii) IPD means
 - (a) interpupillary distance (b) inter papillary distance
 - (c) inter parametric distance (d) intrapapillary diameter.
 - (iv) All glasses are prescribed for presbyopes except
 - (a) single vision (b) bifocal glasses
 - (c) trifocal (d) progressive.
 - (v) Portion of spectacle that rests on ears is called
 - (a) nose bridge (b) temples
 - (c) eyewire (d) nose pads.
 - (vi) type of glasses are prescribed for outdoors to protect from UV light.
 - (a) ARC coating (b) Photochromatic
 - (c) Crizal coating (d) Hard coat.
- (b) Write *true* or *false* (any five) :— 5
- (i) Image jump is more in round bifocal than in executive bifocal lens.
 - (ii) Rimless glasses are also called 3 piece spectacles.
 - (iii) IPD has to be measured only in old patients.
 - (iv) The angle between frame front and temples is called pantoscopic tilt.
 - (v) Curved temples are to be prescribed to children.
 - (vi) Tinted lenses turn black in sunlight.
- (c) Write short notes (any five) :— 5
- (i) Expand ARC.
 - (ii) Name two types of bifocals.
 - (iii) Name two types of progressives.
 - (iv) 2 instruments used for fitting glass in spectacle.
 - (v) 2 parts of frame.
 - (vi) 2 facial forms.

- (d) Match the pair :— 5
- | ' A ' Group | ' B ' Group |
|-----------------------|-----------------------------|
| (i) Coma | (a) Polarising lens |
| (ii) Hard design | (b) Aberration |
| (iii) Fisherman | (c) Progressive lens design |
| (iv) Prevents fogging | (d) Prevents aberrations |
| (v) Aspheric lens | (e) Antifog lens. |
2. Attempt any *two* of the following :— 16
- (a) Write short note on ophthalmic aberrations.
 - (b) Write a note on ARC.
 - (c) Write down different types of face forms.
 - (d) Short note on polarising lens.
3. Attempt any *two* of the following :— 16
- (a) What are the different types of surface coatings ?
 - (b) What are the different types of frame measurements ?
 - (c) Write a note on polarisation and mention its advantages.
 - (d) What are the options in glasses to be prescribed for high myopes?
4. Brief answers (any *two*) :— 16
- (a) What are different types of progressive lenses ?
 - (b) What are the troubleshooting face in progressives ?
 - (c) Mention all the properties of lens material.
 - (d) Define prism. Write in short about its principle and uses.
5. Short notes (any *two*) :— 16
- (a) Explain about different parts of frames with neat labelled diagram.
 - (b) What are the different forms of lenses ? Explain with neat labelled diagram.
 - (c) Elaborate on image jump seen in bifocals.
 - (d) Write down the rules for simple and toric transposition.
6. Attempt the following (any *two*) :— 16
- (a) How is surfacing and polishing of an ophthalmic lens done ?
 - (b) What are pliers ? State its types and use.
 - (c) How does a photochromatic lens work ?
 - (d) What are the different manufacturing methods of glass ?
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