



Name : .....

Roll No. : .....

Invigilator's Signature : .....

**CS/B.OPTM/SEM-4/BO-405/2012**

**2012**

**OPHTHALMIC LENS & DISPENSING OPTICS**

*Time Allotted : 3 Hours*

*Full Marks : 70*

*The figures in the margin indicate full marks.*

*Candidates are required to give their answers in their own words as far as practicable.*

**GROUP - A**

**( Multiple Choice Type Questions )**

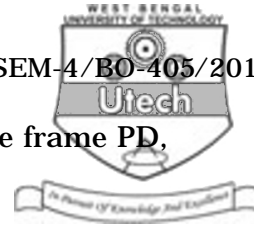
1. Choose the correct alternatives for the following :

10 × 1 = 10

- i) The geometric centre distance of a frame marked 52[ ] 18 is
  - a) 52
  - b) 72
  - c) 70
  - d) 68.
- ii) Which of the following is indicated & should be used when fitting the high index lens wearer ?
  - a) Rounded corners
  - b) Large lenses
  - c) Excessive decentration
  - d) Crown glass lenses.



- iii) If the wearer complains of the bifocal line somewhat in the way when driving the problem may be alleviated by
- increasing the distance between pads
  - moving the vertical position of the pad upward
  - increasing pantoscopic tilt
  - all of these.
- iv) A problem of annoying internal lens reflection occurs most often in
- high plus powered lenses
  - low minus powered clear lenses
  - AR coated clear lens
  - sunlenses.
- v) Which one could not be the cause of both lashes touching the lenses ?
- Insufficient pantoscopic tilt
  - Base curve too flat
  - Pad arms too curled
  - Pads too close or DBL too narrow.
- vi) Which of the following should be avoided when fitting the high minus wearer ?
- Squared off corners
  - High lite lens
  - Thick rim
  - An antireflective coating.



- vii) When the wearer's PD is less than the frame PD,
- a) positive face form is required
  - b) negative face form is required
  - c) pantoscopic tilt is required
  - d) retroscopic tilt is required.
- viii) Barrel distortion is the result of magnification towards lens periphery
- a) decreased
  - b) increased
  - c) both (a) and (b)
  - d) none of these.
- ix) Polycarbonate lenses have a refractive index of
- a) 1.58
  - b) 2.38
  - c) 3.28
  - d) 2.58.
- x) In soft design PAL, the intermediate zone is
- a) shorter
  - b) longer
  - c) both (a) and (b)
  - d) none of these.

**GROUP - B**

**( Short Answer Type Questions )**

Write short notes on any *three* of the following.

3 × 5 = 15

- 2. Impact resistant lenses.
- 3. Segment height.
- 4. Base curve
- 5. Boxing system.



**GROUP - C**

**( Long Answer Type Questions )**

Answer any *three* of the following.  $3 \times 15 = 45$

6. Describe different types of Bifocal lenses with suitable examples. Discuss Aspheric lenses. What do you mean by Thin lite lenses ?  $7 + 5 + 3$
7. a) What is IPD ? How will you proceed to measure monocular and Binocular IPD ?
- b) Describe the problems that a patient may face after weering wrongly centered bifocals.  $10 + 5$
8. a) What are the points to be checked in verification of spectacles of a patient complaining of intolerance to recently prescribed bifocal glasses.
- b) Discuss prism effects in a lens. When and why do we prescribe prisms in spectacle prescription.  $7 \frac{1}{2} + 7 \frac{1}{2}$
9. a) Discuss Occupational health safety Legislation.
- b) Discuss the role of prescribing special lenses to reduce — occupational hazards at work places, industrial accidents and injuries and special requirements for prescribing lenses for sportspersons.
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