	Utech
Name:	
Roll No.:	A Date of Standing and Explored
Invigilator's Signature :	

# CS/B.OPTM/SEM-5/BO-502/2009-10 2009

### **CONTACT LENS - I**

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.

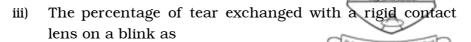
### **GROUP - A**

### ( Multiple Choice Type Questions )

- 1. Choose the correct alternatives for any ten of the following :  $10 \times 1 = 10$ 
  - i) PMMA is a material of
    - a) soft lens
- b) RGP lens
- c) Soft bifocal lens
- d) none of these.
- ii) A patient has spectacle refraction of 12.75 DS at a vertex distance of 14 mm. If this patient is fitted with a contact lens, BVP of the contact lense will be
  - a) 11·50D
- b) 11.00 D
- c) 12·00 D
- d) 10.50 D.

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iv) The minimum DK/t required for D.W. lenses ( daily wear lenses ) according to Holden – Mertz criteria is

a) 
$$24 \times 10^{-9}$$

b) 
$$24 \times 10^{-11}$$

c) 
$$87 \times 10^{-11}$$

- v) The method which produces aspheric soft contact lens is
  - a) Cast moulding
- b) Lathe cut
- c) Spin cast
- d) Reverse process III.
- vi) The water content of HEMA lenses is
  - a) 55% b)

38%

c) 50% d)

60%.

- vii) Each of the following instruments can be used to measure the overall diameter of a rigid gas permeable ( RGP ) lens, except
  - a) V-gauge
  - b) Radiuscope
  - c) Mire fringe deflectometer
  - d) Magnification Loupe.
- viii) The temperature at which most microbes are killed during heat disinfection is between

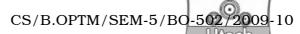
a) 
$$50^{\circ} - 60^{\circ}$$
C

b) 
$$40^{\circ} - 60^{\circ}$$
C

c) 
$$70^{\circ} - 80^{\circ}$$
C

d) none of these.

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- ix) All are material properties of a contact lens except
  - a) ozygen permeability
  - b) oxygen transmissibility
  - c) water content
  - d) modulus of elasticity.
- x) The greater the 'Sag' of a lens
  - a) the steeper the lens becomes
  - b) the flatter the lens becomes
  - c) the lens fits optimally
  - d) none of these.
- xi) The movement of a contact lens is required mainly for
  - a) Tear exchange under the lens
  - b) Removal of tear film debris under the lens
  - c) Provide oxygen to cornea
  - d) Proper wetting of cornea & contact lens.

#### **GROUP - B**

### (Short Answer Type Questions)

Write short notes on any three of the following.

 $3 \times 5 = 15$ 

- 2. F.D.A. classification of soft contact lenses.
- 3. Contact lens. over refraction.
- 4. At least three types of patients in whom you will definitely *Not* prescribe soft C.L. with explanation.
- 5. Role of corneal topography in fitting contact lenses, in difficult cases.

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## (Long Answer Type Questions)



- 6. Write about spherical SCL fitting and the effects of parameter changes.
- 7. a) What is Vertex Compensation ? What is its importance?
  - b) Describe the RGP lens fitting philosophies.
  - c) What are the advantages and disadvantages of SCL over RGP? 4 + 5 + 6
- 8. a) What are the different contact lens manufacturing methods? Explain the cast molding method of lens manufacturing method. Also mention its advantages & disadvantages.
  - b) What are the factors responsible for a contact lens to stay on eye? 8 + 3 + 4
- 9. a) What are the principles of action, of the different components of a standard contact lens care solution available commercially?
  - b) Give the Market names of three commonly used SCL care solutions. 12 + 3

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