Name : .....

Roll No. : .....

Invigilator's Signature : .....

CS/B.OPTM/SEM-4/BO-403/2011

2011
CLINICAL REFRACTION-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 the following : $10 \times 1 = 10$

   i) Fogging means making the eye

   a) artificially myopic b) artificially astigmatic

   c) artificially hyperopic d) none of these.

   ii) Spherical equivalent of - 1·00 D.sph /- 3·00 D.cyl@90 is

   a) – 2·50 D.sph b) + 2·50 D.sph

   c) – 4·00 D.sph d) – 2·00 D.sph

   iii) On the log MAR chart the 6/60 has a log MAR value of

   a) 1·0 b) 0·8

   c) 0·7 d) none of these.

iv) The technique of binocular balance, where 3PD BD is placed in front of right eye and 3PD BU in front of left eye is called

a) dissociated duochrome balance

b) prism dissociation

c) Turville infinity balance

d) none of these.

v) Equivalent of visual acuity 6/24 is

a) 20/40 b) 20/80

c) 20/100 d) 20/200.

vi) In compound hypermetropic astigmatism

a) both foci are in front of retina

b) both foci are behind the retina

c) one focus is in front of retina and another behind

d) one focus is on the retina and the other is behind.

vii) Premature presbyopia occurs in all except

a) uncorrected hypermetropia

b) premature hardening of crystalline lens

c) weakening of ciliary muscles

d) uncorrected myopia.

viii) Cycloplegic eyedrops are indicated in all except

a) pediatric patients

b) young hyperopes

c) glaucoma patients

d) patients having spasm of accommodation.

ix) The principle of stenopaic slit is based on

a) astigmatic fan b) pinole phenomenon

c) Strum's conoid d) none of these.

x) During verification of a spherical lens the object focused at a distance seem to move in ..... direction in case of a convex tens.

a) same direction b) opposite direction

c) both directions d) no direction.

GROUP – B

(Short Answer Type Questions)

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

$3 \times 5 = 15$

2. a) Strum's conoid

b) Scheiner Principle

c) Vertex power measurement

d) Spectacle frame choice

GROUP – C

(Long Answer Type Questions)

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

3. a) How will you measure I.P.D.? In what cases is monocular P.D. measurement needed ?

   b) Discuss "Objective Refraction". $7\frac{1}{2} + 7\frac{1}{2}$

4. a) What is Presbyopia ?

   b) How can you measure "amplitude of accommodation" ?

   c) Describe the construction of Snellern's chart. 5 + 5 + 5

5. a) Explain "Automated Objective Refraction".

   b) There are various typs of auto-refractors, each based on a different principle. Discuss any 2 such principles and the auto-refractors made, based on these principles.

   5 + 5 + 5

6. a) Discuss the role of J.C.C. (Jackson crossed cylinder) during refraction. Explain its use on the basis of principle involved.

   b) Discuss the Javal Schiotz Principle and Bausch and Lomb Principle based keratometers. Bring out the basic difference between the two types of keratometers. 5 + 10