

MANIPAL UNIVERSITY

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – MAY/JUNE 2013

SUBJECT: SQUINT AND BINOCULAR VISION

Monday, May 27, 2013

Time: 10:00-13:00 Hrs.

Max. Marks: 80

☞ **Draw diagrams wherever necessary.**

1. Fill up the blanks:

- 1A. The treatment of choice for infantile esotropia is _____
- 1B. For easy and comfortable fusion, the retinal images has to be equal in form, _____ and _____
- 1C. The most convenient method to determine the fixation behavior of the eye is by _____
- 1D. Retinal elements of two eyes that share a common subjective visual direction are called _____
- 1E. The normal range of AC/A ratio is _____

(1×5 = 5 marks)

2. Write short notes on (any SEVEN):

- 2A. Brief on incomittant strabismus under following headings:
 - i) Muscle sequelae
 - ii) Optometric management
- 2B. Write briefly on any two tests used for finding out suppression in clinical practice.
- 2C. Optical treatment of a squint patient
- 2D. Dissociated Vertical Deviation
- 2E. What is major amblyoscope? Brief on its uses.
- 2F. Secondary esodeviations
- 2G. Anomalies of convergence and its management
- 2H. Methods you would adopt to assess the visual acuity of a 1 year old who came to your clinic

(5×7 = 35 marks)

3. Answer both the questions:

- 3A. You have a child of 4 years with squint for consultation and a refractive error as given below:
OD: +5.00/-2.00×180(6/36,N₈), OS: +3.00/ -1.00 × 90(6/18,N₆). All other findings are within normal limits. Brief on your tentative diagnosis and management plan in this case.
- 3B. Write in detail on anatomy of extrinsic and intrinsic muscles of the eye

(10×2 = 20 marks)

4. Answer any ONE of the following:

4A. Write on:

- i) Duane's classification of exodeviation
- ii) Management options for exodeviations

- iii) Alphabetical pattern squints
- iv) Psuedoexotropia

(5+6+6+3 = 20 marks)

4B. **Write briefly on:**

- i) Horopter and Panum's space
- ii) Physiological diplopia
- iii) Grades of BSV and its clinical relevance
- iv) Qualitative and quantitative tests for stereopsis

(5+3+5+7 = 20 marks)



MANIPAL UNIVERSITY**THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – MAY/JUNE 2013****SUBJECT: CONTACT LENS
(NEW REGULATION)**

Wednesday, May 29, 2013

Time: 10:00-13:00 Hrs.

Max. Marks: 80

✍ Draw diagrams wherever necessary.**1. Fill up the blanks:**

- 1A. As per Cartesian system, if a contact lens fitted on OD is displaced 1mm nasally with no decentration vertically, it can be demonstrated as _____
- 1B. If a patient who is fitted with soft CL complains blurring of vision immediately after blink and the vision is generally good in primary gaze position, that indicates the lens fit is _____
- 1C. A steep fitting RGP contact lens will illustrate _____ in Fluorescein pattern.
- 1D. _____ is the common corneal sign that indicates contact lens solution toxicity.
- 1E. A soft toric CL fitted on a subject's OD is showing a 10 degrees rotation toward the nasal side of the patient. If patient's astigmatic axis for BCVA is 180 degrees, _____ would be the axis of the final toric lens ordered.

(1×5 = 5 marks)

2. Write short notes on any SEVEN:

- 2A. RGP contact lens manufacturing techniques
- 2B. Assessment of a soft contact lens fit
- 2C. A patient with refractive error of -5.00DS with avg K of 7.3mm in OD was fitted with a RGP contact lens. After over-refraction, the final contact lens power recorded was -3.75DS. Comment on the type of contact lens fit and record the expected fitting characteristics.
- 2D. Comment on Silicone hydrogel contact lenses. Write a note on three different silicone hydrogel brands available in Indian market.
- 2E. Write a note on CLPC and CLPU.
- 2F. Pellucid Marginal Degeneration
- 2G. What are the indications of paediatric contact lenses? How would you instruct the patient's mother about contact lens handling?
- 2H. Record the possible reasons if contact lens users are approaching you with the following symptoms:
 - i) Blurring of vision with CL's
 - ii) Watering
 - iii) Photophobia

(5×7 = 35 marks)

3. **Answer the following questions:**

- 3A. Write a note on the indications of therapeutic contact lenses.
- 3B. Briefly describe on wearing modalities of contact lenses. Provide two examples for each among the CL's available in the market.

(10×2 = 20 marks)

4. **Answer any ONE question.**

- 4A. Explain in detail about Keratoconus and its management options.
- 4B. These are the parameters measured on a patient's eye who came to you for CLs. (All measurements are for OS)

BCVA: - 7.00DS / -0.75 DC × 170 (6/6)

Keratometry: K1 = 43.25 @ 170 ; K2 = 44.25 @ 80

Calculate and explain the following things:

- i) Back vertex power of contact lens
- ii) Accommodation needed with CL
- iii) Calculate r_1 , r_2 and find out what would be the BC for a soft & RGP CL for this patient.
- iv) Draw the Fluorescein pattern for RGP lenses of BC's 7.3 mm & 7.7mm
- v) What would be the final BVP of the RGP contact lens if the BC's are 7.3 & 7.7 mm?

(20×1 = 20 marks)



MANIPAL UNIVERSITY

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – MAY/JUNE 2013

SUBJECT: GERIATRIC OPTOMETRY AND PAEDIATRIC OPTOMETRY
(NEW REGULATION)

Friday, May 31, 2013

Time: 10:00-11:30 Hrs.

Max. Marks: 40

✍ **Draw diagrams wherever necessary.**

1. Fill in the blanks.

- 1A. STYCAR can be expanded as _____
- 1B. Vertical stress lines in the corneal stroma seen in Keratoconus is known as _____
- 1C. Primary destruction of insulin producing cells in the pancreas causes type _____ diabetes.
- 1D. _____ is the retinoscopic procedure used to assess lag of accommodation.
- 1E. _____ is known as the severe form of Albinism.

(1×5 = 5 marks)

2. Write short notes on any THREE:

- 2A. Write briefly on any five visual acuity tests used in Pre-school children.
- 2B. Congenital cataract and Marfan syndrome
- 2C. Age related changes in the retina
- 2D. Embryonic development of posterior segment structures and crystalline lens.

(5×3 = 15 marks)

3. Essay questions.

- 3A. Elaborate on your procedure of work-up if an infant presented to you with a complaint of watering of the eye.
- 3B. Explain the spectacle and contact lens dispensing considerations in geriatric patients.

(10×2 = 20 marks)



MANIPAL UNIVERSITY

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – MAY/JUNE 2013

SUBJECT: OCULAR DISEASES + EYE AND SYSTEMIC DISEASES
(NEW REGULATION)

Monday, June 03, 2013

Time: 10:00-13:00 Hrs.

Max. Marks: 80

- ✍ All questions are compulsory.
✍ Draw diagrams wherever necessary.

1. Draw a neat labeled diagram of pupillary light reflex pathway. Write a note on Marcus Gunn pupil and Horner's syndrome.

(6+7+7 = 20 marks)

2. List differences between concomitant and incomitant squint. Write a note on Hess charting. Describe blow out fracture of orbit.

(5+5+10 = 20 marks)

3. Write short notes on:

- 3A. Fungal corneal ulcer
3B. Grading of anterior chamber angle as seen on gonioscopy
3C. Proliferative diabetic retinopathy
3D. Chalazion
3E. Treatment of aphakia

(8×5 = 40 marks)



MANIPAL UNIVERSITY

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – MAY/JUNE 2013

**SUBJECT: LOW VISION AIDS
(NEW REGULATION)**

Wednesday, June 05, 2013

Time: 10:00-11:30 Hrs.

Max. Marks: 40

1. Fill in the blanks.

- 1A. _____ is the reduced Snellen equivalent to a 2-M letter viewed at 40 cms.
 1B. _____ is believed to be the major risk factor for Stargardt's disease.
 1C. Amsler's chart covering an area of _____
 1D. Iris transillumination is seen in _____
 1E. The reduction of visual function caused by the scattering of incoming light is known as _____
(1×5 = 5 marks)

2. Write short notes on any THREE:

- 2A. Diseases without demonstrable field defects.
(5 marks)
- 2B. Discuss the significance of colour vision testing for a low vision patient. Write a note on Farnsworth D-15 test.
(2½+2½ = 5 marks)
- 2C. Educational considerations for the child with low vision.
(5 marks)
- 2D. Describe the role of prisms in low vision care. What are the advantages and disadvantages of Fresnel prism?
(2½+2½ = 5 marks)

3. Essay questions:

- 3A. Describe the characteristics of Galilean and Keplerian telescopes and compare them.
 A telescope is composed of a +5.00 D objective lens and a -25D ocular lens. The system is focused for infinity by an emmetropic patient. Determine the magnification and tube length of the telescope.
(7+3 = 10 marks)
- 3B. Discuss age related macular degeneration under the following headings:
 i) Clinical features
 ii) Medical management
 iii) Low vision management
(3+3+4 = 10 marks)

