

MANIPAL UNIVERSITY**THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – JUNE 2010****SUBJECT: SQUINT AND BINOCULAR VISION****(COMMON FOR BOTH OLD AND NEW REGULATION)**

Tuesday, June 08, 2010

Time: 14:00-17:00 Hrs.

Max. Marks: 80

✍ **Draw diagram wherever necessary.**

1. Fill up the blanks:

- 1A. To measure right hypertropia, the prism that has to be kept before left eye is _____.
- 1B. Shortest of all orbital walls of the eye is _____.
- 1C. The synergist of left superior rectus is _____.
- 1D. Test used to differentiate between neurogenic paralysis and structural restriction of eye movements is _____.
- 1E. Nystagmus elicited on covering either eye, not when both eyes are open is called _____.

(1×5 = 5 marks)

2. Write short notes on (any SEVEN):

- 2A. Common tests used for ruling out latent squints.
- 2B. Mechanism of BSV and its advantages.
- 2C. Write on:
 - i) Worth Four Dot Test
 - ii) After image test
- 2D. Brown syndrome.
- 2E. Differentiate between agonist, antagonist, synergist and yoke muscle.
- 2F. Pseudoesotropia
- 2G. Trochlear nerve palsy.
- 2H. What is convergence? List the types. Briefly write on convergence insufficiency and convergence excess.

(5×7 = 35 marks)

3. Answer BOTH the questions.

- 3A. Accomodative esotropia-types, etiology, clinical features and treatment.
- 3B. Define stereopsis. What is the basic principle of any stereopsis test? Brief on 4 tests used for measuring stereopsis.

(10×2 = 20 marks)

4. Answer any ONE of the following.

- 4A. Define amblyopia. Classify and brief on each with etiology, clinical features and management options outlined.
- 4B. You have a 50 year old male coming to your clinic with complaint of double vision for past 1 week. Give an account of the methodology you would adopt to reach a diagnosis with the tests of relevance. Brief on the differential diagnosis you would look for in this case.

(2+18 = 20 marks)

(15+5 = 20 marks)



MANIPAL UNIVERSITY

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – JUNE 2010

SUBJECT: CONTACT LENS

(COMMON FOR BOTH OLD AND NEW REGULATION)

Thursday, June 10, 2010

Time: 14:00-17:00 Hrs.

Max. Marks: 80

Attempt questions as instructed. Draw diagrams and flowcharts wherever necessary.

1. Answer the following questions as instructed:

1A. State true or false:

“ACUVUE Clear” is a brand name for conventional daily wear soft contact lenses.

1B. State true or false:

Protein deposits can be removed by thermal disinfection.

1C. Fill in the blank:

Povidone increases the _____ in a soft contact lens material

1D. Fill in the blank:

CLPU is generally associated with _____ Bacteria

1E. Fill in the blank:

Palm test is used for _____

(1×5 = 5 marks)

2. Answer any SEVEN of the following questions:

2A. Describe in brief about soft contact lens manufacturing process with diagram.

(5 marks)

2B. What is axial edge lift? Comment about its significance. Draw a neat diagram of tricurve RGP contact lens and mention different parameters.

(2+3 = 5 marks)

2C. How does accommodation and convergence change from wearing spectacle lenses to contact lenses? Explain with example and diagram.

(5 marks)

2D. What are advantages of contact lens over spectacle for sporting activities? How will you manage with contact lenses those who are involve in water sports?

(2½+2½ = 5 marks)

2E. Describe lens replacement schedule for soft contact lenses.

(5 marks)

2F. Write a short note on soft spherical contact lens fitting assessments.

(5 marks)

2G. Briefly explain US FDA group I and group IV contact lens material? Give one example of each available in current market.

(4+1 = 5 marks)

2H. Write a short note on non tear related deposit.

(5 marks)

3. Answer the following questions:

3A. What is CLPC? Describe the difference between papillae and follicle. Write in detail about its sign, symptom, aetiology and management.

(1+3+6 = 10 marks)

3B. What are the different ways to disinfect a soft contact lens? Describe each.

(10 marks)

4. Answer any ONE of the following questions.

4A. What are the indications of soft toric contact lenses? Explain with diagram about various ways of stabilization techniques for soft toric contact lenses.

What is reference mark in soft toric contact lenses? How will you neutralize the rotation produced by a soft toric contact lens? Describe with example.

(2+12+2+4 = 20 marks)

4B. Elaborate on the methodology of work up and management plan of a 22 years old male who present in your clinic. The details of the patient are given below:

Spectacle refraction:

OD: -6.00 D Sph /-2.00 DCyl \times 90⁰ (6/6, N₆)

OS: -10.50 D Sph (6/9, N₆)

Keratometry reading:

OD: K₁= 41.00 D@ 90⁰ (8.23 mm), K₂= 43.00 D@180⁰ (7.85 mm)

Os: K₁= 42.00 D@ 90⁰ (8.04 mm), K₂= 42.00 D@180⁰ (8.04 mm)

The patient is a student, initial wearer, computer user and loves to drive bike

Mention contact lens options and trial lens parameters for each eye while writing answer.

(20 marks)



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MANIPAL UNIVERSITY

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – JUNE 2010

SUBJECT: GERIATRIC OPTOMETRY AND PAEDIATRIC OPTOMETRY

(NEW REGULATION)

Saturday, June 12, 2010

Time: 14:00-15:30 Hrs.

Max. Marks: 40

1. Fill in the blanks:

- 1A. Fixation will be developed in a child by _____ months.
- 1B. _____ is the part of primitive system from which ocular structure develops.
- 1C. In _____ part of the crystalline lens, recently formed lens fibres will be present.
- 1D. _____ is the average anterior chamber depth at the age of 70 years.
- 1E. _____ is one of the disadvantages of monovision contact lens correction of presbyopic patients.

(1×5 = 5 marks)

2. Write short notes on any THREE of the following:

- 2A. Write a note on development of vision in the early years of life.
- 2B. What are the factors to be considered while selecting a frame for children? Explain.
- 2C. Write a note on the most common malignant ocular tumour of childhood.
- 2D. What are the important topics to be covered while taking history from a geriatric patient?

(5×3 = 15 marks)

3. Write in detail about the following:

- 3A. Write a note on the following age-related systemic diseases and their ocular manifestation in geriatric patients.
 - i) Hypertension
 - ii) Diabetes mellitus
- 3B. A 4 years old child brought to your clinic with a complaint of watching television at closer distance as per the parent since 1 month. How would you go ahead with examination of the child? Explain.

(10×2 = 20 marks)



MANIPAL UNIVERSITY**THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – JUNE 2010****SUBJECT: RESEARCH METHODOLOGY AND STATISTICS****(COMMON FOR BOTH OLD AND NEW REGULATION)**

Tuesday, June 15, 2010

Time: 14:00 – 17:00 Hrs.

Max. Marks: 80

Answer ALL the questions.

- 1A. State the uses of Statistics in health science.
1B. Discuss about the various scales of measurement.
(5+5 = 10 marks)
- 2A. Describe the process of Simple random sampling using random number table. Enumerate the merits and demerits of simple random sampling.
2B. Differentiate histogram and bar diagram.
((4+2)+4 = 10 marks)
- 3A. What is the meaning of central tendency? Discuss the various measures of Central tendency.
3B. Describe the interpretation of Scatter diagram with sketches.
(6+4 = 10 marks)
- 4A. Explain the meaning of ratio and proportion with example.
4B. Define the health information system. List the components of health information system.
(4+6 = 10 marks)
- 5A. What is epidemiology? What are the aims of epidemiology?
5B. Write short note on case series design.
((2+3)+5 = 10 marks)
- 6. Write short note on:**
- 6A. Discrete and continuous variables.
6B. Inclusive and exclusive type class intervals.
6C. Normal distribution.
6D. Quartiles and percentiles.
6E. Characteristics of good hypothesis.
6F. Registration of vital events.
(5×6 = 30 marks)



Reg. No.

MANIPAL UNIVERSITY

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – JUNE 2010

SUBJECT: OCULAR DISEASES + EYE AND SYSTEMIC DISEASES

(COMMON FOR BOTH OLD AND NEW REGULATION)

Thursday, June 17, 2010

Time: 14:00-17:00 Hrs.

Max. Marks: 80

☞ All questions are compulsory. Draw neat diagrams wherever necessary.

1. Describe in detail Accomodative Esotropia and its management.

(10+10 = 20 marks)

2. Discuss etiology, clinical features and management of dry eye syndrome.

(2+8+10 = 20 marks)

3. Write short notes on:

3A. RGP Lenses

3B. Diabetic Retinopathy

3C. Gonioscopy

3D. Brimonidine

3E. Vernal Catarrh

(8×5 = 40 marks)



Reg. No.

MANIPAL UNIVERSITY

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – JUNE 2010

SUBJECT: LOW VISION AIDS

Saturday, June 19, 2010

Time: 14:00-15:30 Hrs.

Max. Marks: 40

✍ **Draw diagrams wherever necessary.**

1. Fill in the Blanks:

- 1A. In 'M' chart used for near vision assessment in low vision patients, 1M print subtends _____ minutes of arc at 40cm.
- 1B. _____ is the most suitable near vision device for a musician who has low vision.
- 1C. _____ type of telescope is known as Astronomical Telescope.
- 1D. _____ is the major cause of low vision in developed countries.
- 1E. _____ is the most convenient test to assess the central visual field of a low vision patient in your clinic.

(1×5 = 5 marks)

2. Short Notes: (Answer any THREE)

- 2A. Non-optical devices.
- 2B. What is contrast sensitivity? Give 4 examples of Low vision conditions where contrast is reduced. How will you improve contrast in Low vision patients?
- 2C. Spectacle Magnifier.
- 2D. Give 4 examples of macular causes of Low vision. What are the prominent clinical features of macular disorders?

(5×3 = 15 marks)

3. Essay:

- 3A. Explain the methods and various charts used to measure near vision of a Low vision patient. Write a note on Kestenbaum rule with examples.
- 3B. Explain the optics of Afocal telescope with neat diagrams. Calculate the Magnification and Tube length of telescopes with the specifications given below.
- i) Objective +10 D Eyepiece +25D
- ii) Objective +7D Eyepiece -15D

(10×2 = 20 marks)

