MANIPAL UNIVERSITY

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – DECEMBER 2009

SUBJECT: SQUINT AND BINOCULAR VISION

Thursday, December 10, 2009

Time: 10:00-13:00 Hrs.   Max. Marks: 80

✍ **Draw diagrams wherever necessary.**

1. **Fill up the blanks:**

1A. Superior division of III Cranial nerve supplies _____.
1B. Deviation of paretic eye when non paretic eye is fixing is called _____.
1C. In worth four dot test, if patient sees 2 red and 3 green, it indicates _____.
1D. Prominent epicanthal folds is a cause of _____.
1E. Principle of Bagolini striate glass test is _____.

(1×5 = 5 marks)

2. **Write short notes on (any SEVEN):**

2A. Differentiate between sensory fusion, motor fusion and egocentric localization.
2B. Origin and insertion of extra ocular muscles.
2C. A and V pattern squint
2D. Nystagmus
2E. Brief on corneal reflection tests and prism and cover test.
2F. Visual acuity tests that can be used in a squint patient who is 1 year of age.
2G. Acquired non accommodative esotropia.
2H. What is NPA and NPC? How can you determine it and what is their clinical significance?

(5×7 = 35 marks)

3. **Answer BOTH the questions.**

3A. Define stereopsis. What is the difference between stereoscopic and non stereoscopic clues? Explain how you can find out the grades of BSV with a synaptophore and other uses of synaptophore.
3B. What is paralytic squint and brief on how you can find out the paralyzed muscle with diplopia charting? Give an outline of management options for a case of paralytic squint.

(10×2 = 20 marks)

4. **Answer any ONE of the following.**

4A. What are esodeviations? Write briefly on etiology, clinical characteristics and management of accommodative and non accommodative esotropia.

(2+10+8 = 20 marks)

4B. Write on:
     i)   clinical features of amblyopia.
     ii)   principles on non surgical treatment of strabismus.

(10 +10 = 20 marks)

✿✿✿✿✿

MANIPAL UNIVERSITY

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – DECEMBER 2009

SUBJECT: CONTACT LENS

(OLD REGULATION)

Friday, December 11, 2009

Time: 10:00-13:00 Hrs.   Max. Marks: 80

✍ **Attempt questions as instructed.**

✍ **Draw diagrams and flowcharts wherever necessary.**

1.   **Answer the following questions as instructed:**

1A. Fill in the blank:

Axial anisometropia is best corrected by _____

1B. Fill in the blank:

Mercury deposits usually changes the soft contact lens to _____ colour.

1C. Fill in the blank:

Decrease SAG makes the fit _____.

1D. State true or false:

Gm +ve bacteria are the causative organism for CLPC.

1E. State true or false:

Lipid deposit can be removed by H_2O_2 system.

$(1 \times 5 = 5 \text{ marks})$

2.   **Answer any SEVEN of the following questions:**

2A. Write a short note on epithelial and Stromal changes of cornea due to hypoxia.

$(2\frac{1}{2} + 2\frac{1}{2} = 5 \text{ marks})$

2B. What is wettability? What is its significance? How will you measure? Describe briefly.

$(1+1+3 = 5 \text{ marks})$

2C. What is effective power? What would be the power of contact lens if the spectacle refraction is +10.00 D Sph? Consider vertex distance as 14 mm and ignore the effect of contact lens on tear film.

$(2+3 = 5 \text{ marks})$

2D. Compare spectacle Vs contact lens in terms of their advantages and disadvantages.

(5 marks)

2E. What are the indications for post refractive surgery contact lens fitting? What are the contact lens options available? Describe each briefly. How does it differ from normal contact lens fitting?

$(2+2+1 = 5 \text{ marks})$

2F. Write a short note on 3 & 9 O'clock staining.

(5 marks)

2G. Write a short note on dynamic and static fitting assessments for spherical RGP contact lens.

(2½+2½ = 5 marks)

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

(4+1 = 5 marks)

3. **Answer the following questions:**

3A. What are the Invasive and Non-invasive ways of assessing tear film? Describe briefly.

3B. Define Microbial Keratitis. Write in detail about its sign, symptom, aetiology and management.

(10×2 = 20 marks)

4. **Answer any ONE of the following:**

4A. Write in detail about tear and non tear related deposits. How will you manage such situations for your contact lens patient?

(20 marks)

4B. What is Keratoconus? Comment about its clinical features? What are the contact lens options available for a bilateral keratoconic patient? Describe each option in detail.

(2+3+15 = 20 marks)

Reg. No.									

MANIPAL UNIVERSITY

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – DECEMBER 2009

SUBJECT: OCULAR DISEASES + EYE AND SYSTEMIC DISEASES

(OLD REGULATION)
Saturday, December 12, 2009

Time: 10:00-13:00 Hrs.   Max. Marks: 80

✎   **All questions are compulsory. Draw diagrams wherever necessary.**

1.   Discuss in detail the etiology, clinical features and management of keratconus.

$$(4+8+8 = 20 \text{ marks})$$

2.   Describe different types of perimetry and visual field changes in glaucoma.

$$(10+10 = 20 \text{ marks})$$

3.   Write short notes on:

3A.   Papillitis
3B.   Central serous retinopathy
3C.   Cyclopentolate
3D.   Symblepheron
3E.   Hess chart

$$(8\times5 = 40 \text{ marks})$$

༺ﬗﬗﬗﬗ༻

MANIPAL UNIVERSITY
THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – DECEMBER 2009
SUBJECT: RESEARCH METHODOLOGY AND STATISTICS
Monday, December 14, 2009

Time: 10:00-13:00 Hrs.   Max. Marks: 80

1A. State the functions and limitations of statistics.
1B. Explain discrete and continuous variables with example.

(5+5 = 10 marks)

2A. Differentiate nominal and ordinal scales of measurement with example.
2B. Explain stratified random sampling with example. State its advantages over simple random sampling.

(5+5 = 10 marks)

3. Following are the height distribution of 30 students of a class.

Height in inches of 30 students of a class				
60	71	67	68	69
72	61	60	65	70
66	65	64	69	68
60	63	70	67	69
62	63	67	68	67
70	73	65	69	74

i) Prepare a frequency table with class intervals 60-63, 63-66, 66-69, ……..
ii) Represent the data by a histogram.

(5+5 = 10 marks)

4A. Calculate median and standard deviation for the following data:
Sys. B.P (mmHg): 121, 128, 125, 119, 122, 125, 118, 126,
4B. Define and explain the use of Coefficient of Variation.

(6+5 = 11 marks)

5A. Explain the interpretation of correlation coefficient.
5B. Given the mean and standard deviation of weight of new born babies are 3 Kg and 0.5 Kg respectively. Assuming Normality estimate the percentage of newborns with weight
i) more than 2.5 Kgs   ii) between 2.5 and 3.5 Kgs

(4+5 = 9 marks)

6A. Discuss Sample registration system as a source of health information system.
6B. Explain the terms rate and ratio with example.

(5+5 = 10 marks)

7A. Differentiate Reliability and Validity with example.
7B. Define Crude death rate. What are its uses and limitations?

(5+5 = 10 marks)

8A. Enumerate the uses of descriptive epidemiology.
8B. Write short note on Cross-sectional studies.

(5+5 = 10 marks)

MANIPAL UNIVERSITY

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – DECEMBER 2009

SUBJECT: LOW VISION AIDS

(OLD REGULATION)

Tuesday, December 15, 2009

Time: 10:00-11:30 Hrs.   Max. Marks: 40

1.   **Fill in the blanks:**

1A.   The usual testing distance for Pelli-Robson contrast sensitivity chart is_____.

1B.   _____ is the magnification produced by a Galilean telescope with objective = +10.00D and Objective = –40.00D.

1C.   _____ feature of a CCTV is the important advantage, if the patient describes fading vision when high-intensity light is required for reading.

1D.   Field expansion produced by a Galilean reverse telescope is based on_____ of the image

1E.   A corrected _____ dioptre myopic eye with 20/200 vision should be able to read 1M at 10cms with glasses off.

                                                                    (1×5 = 5 marks)

2.   **Answer any THREE:**

2A.   Explain about contact lens telescope briefly.

2B.   Write a short note on visual acuity assessment in child with vision impairment.

2C.   Write down about the devices that can control photophobia in low vision patients.

2D.   Describe low vision management in albinism patients.

                                                                    (5×3 = 15 marks)

3.   **Answer Both:**

3A.   Describe various methods for calculating the reading adds. Give an account on the various near low vision optical aids.

3B.   Define magnification. Discuss the various types of magnification in low vision care.

                                                                    ((3+7)+10 = 20 marks)

MANIPAL UNIVERSITY

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – DECEMBER 2009

SUBJECT: GERIATRIC OPTOMETRY AND PAEDIATRIC OPTOMETRY

(OLD REGULATION)

Wednesday, December 16, 2009

Time: 10:00-11:30 Hrs.   Max. Marks: 40

✍ **Draw diagrams wherever necessary.**

1. **Fill in the Blanks:**

1A. At the time of embryonic development, sensory retina is developed from _____

1B. _____ is the type of amblyopia seen in Congenital Ptosis

1C. The central corneal curvature is relatively _____ at birth compared to adults.

1D. Older individuals will adapt contact lenses faster than youngsters due to _____

1E. _____ is the age related eye lid problem that causes exposure keratitis

(1×5 = 5 marks)

2. **Short Notes (Answer any THREE):**

2A. Explain Autosomal Dominant and Autosomal Recessive transmission. Give 2 ocular conditions for each transmission.

2B. Write notes on OKN & VEP.

2C. ARMD and its management.

2D. Changes happen to cornea and uvea due to ageing.

(5×3 = 15 marks)

3. **Essay:**

3A. Write in detail about the common age related changes happens to refractive media of the eye.

3B. Explain in detail about the spectacle and contact lens dispensing considerations in pediatric age group.

(10×2 = 20 marks)

🙐🙐🙐