MANIPAL UNIVERSITY

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – JUNE 2007

SUBJECT: RESEARCH METHODOLOGY AND STATISTICS

Thursday, June 14, 2007

Time: 3 Hrs.   Max. Marks: 80

✍   **Answer ALL the questions.**

1A.   Describe briefly the various steps involved in research process.

1B.   Describe dependent, independent, continuous and discrete variables with examples.

(6+4 = 10 marks)

2A.   Define random sample. Enumerate the advantages of probability sampling.

2B.   What do you mean by measure of central tendency?

Birth weights of 10 babies are given below:

Birth wt. (kgs): 2.1, 2.6, 3.2, 3.0, 1.9, 2.6, 3.5, 3.4, 2.6, 3.8.

Calculate arithmetic mean, median and mode.

((1+3)+(1+2+2+1) = 10 marks)

3A.   Enumerate properties of Normal distribution with the help of a neat diagram.

3B.   It is observed that the average length of hospital stay of patients after a particular surgery follows a normal distribution with mean 10 days and a standard deviation of 3 days. Find the probability that a randomly selected patient from this group will have a length of stay:

i)   More than 7 days.

ii)   Less than 16 days.

(5+5 = 10 marks)

4A.   Describe descriptive epidemiology. Enumerate its uses.

4B.   What is health information system? What are its uses? Enumerate its sources.

((2+3)+(1+2+2) = 10 marks)

5.   Write short notes on the following:

5A.   Characteristics of a good hypothesis.

5B.   Scales of measurements.

5C.   Graphical presentation of data.

5D.   Standard deviation and Coefficient of variation.

5E.   Correlation using scatter diagram.

5F.   Fertility statistics.

5G.   Role of biostatistics in health sciences.

5H.   Stratified random sampling.

(5×8 = 40 marks)

MANIPAL UNIVERSITY

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – JUNE 2007

SUBJECT: SQUINT AND BINOCULAR VISION

Friday, June 15, 2007

Time: 3 Hrs.   Max. Marks: 80

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

1. What is esodeviation? Explain briefly on comittant esodeviations under the following headings.

    i)   Etiology.

    ii)   Clinical Characteristics.

    iii) Therapy.

                                                                         (2+18 = 20 marks)

2. Define Amblyopia. A boy of 4 years has come to your clinic diagnosed elsewhere as strabismic amblyopia. How will you confirm the diagnosis and brief on your management plan?

                                                                                  (20 marks)

3.   Write short notes on:

3A. Common tests performed for paralytic strabismus (any four).

3B. Briefly explain the terms ductions, versions and vergence (with examples).

3C. Define Stereopsis. Write on 3 tests used to measure stereoacuity.

3D. A and V patterns of strabismus.

3E. Write briefly on:

    i)   Four prism base out test.

    ii)   Forced duction test.

                                                                         (8×5 = 40 marks)

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THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – JUNE 2007

SUBJECT: CONTACT LENS

Saturday, June 16, 2007

Time: 3 Hrs.   Max. Marks: 80

✍ **ALL questions are compulsory. Draw diagrams wherever necessary.**

1.   Elaborate on your methodology of work up and dispensing contact lens to a male of 30 years, on retinoscopy OD:-1.00/-1.50×180, OS: -0.50/-1.00×170 who wants to shift to contacts from spectacles. He is a welder.

(15+5 = 20 marks)

2A.   Brief on the anatomy of the cornea and the physiological considerations of the cornea that are of importance in the design of contact lenses.

2B.   Explain in detail the effects of contact lenses on corneal physiology.

(10+10 = 20 marks)

3.   Write short notes on:

3A.   Fitting and dispensing of soft toric contact lenses.

3B.   Indications of contact lens wear.

3C.   Preliminary assessments essential before fitting an initial contact lens for a patient.

3D.   Brief on:

   i)   3-9o' clock staining.

   ii)   Superficial punctate keratitis due to contact lens wear.

3E.   Hydrophilic Bandage Lenses. Brief on the indications for bandage contact lens therapy, principles of fitting and its complications.

(8×5 = 40 marks)

MANIPAL UNIVERSITY

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – JUNE 2007

SUBJECT: OCULAR DISEASES + EYE AND SYSTEMIC DISEASES

Monday, June 18, 2007

Time: 3 Hrs.   Max. Marks: 80

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

1. Discuss the differential diagnosis of red eye.

(20 marks)

2. Classify Retinal Detachment, etiology, clinical features and management of retinal detachment.

(20 marks)

3. Short notes:

3A. Pterygium.

3B. Episcleritis.

3C. Field abnormalities in primary open angle glaucoma.

3D. Retinoscopy.

3E. After Cataract.

(8×5 = 40 marks)

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THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – JUNE 2007

SUBJECT: LOW VISION AIDS

Tuesday, June 19, 2007

Time: 1½ Hrs.   Max. Marks: 40

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

1. A 15–year–old patient diagnosed to be having Stargardt's disease has been referred to your Low vision clinic for the needed assistance. Give an account of your approach to this patient.

(20 marks)

2. Write short notes on:

2A. Stand magnifier.

2B. Bioptic telescope.

2C. Role of Optometrists in Low vision management.

(10 marks)

3. Describe any four conditions that affect the central field of vision.

(10 marks)

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THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – JUNE 2007

SUBJECT: GERIATRIC OPTOMETRY AND PAEDIATRIC OPTOMETRY

Wednesday, June 20, 2007

Time: 1½ Hrs.   Max. Marks: 40

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

1. Discuss the common structural and physiological changes in eye lids, conjunctiva, cornea and lens in geriatric population.

(20 marks)

2. Describe in detail about the factors to be considered while prescribing spectacles in Paediatric population.

(15 marks)

3. Write a note on Paediatric case history.

(5 marks)

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