MANIPAL ACADEMY OF HIGHER EDUCATION

(Deemed University)

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – JUNE 2005

SUBJECT: BASIC STATISTICS AND RESEARCH METHODLOGY

Wednesday, June 15, 2005

Time: 3 Hrs.   Max. Marks: 80

✍ **Answer all the questions.**

1A. Discuss the role of Biostatistics in health care delivery system.

1B. What are the various types of variables in research? Give examples for each.

$$(5+5 = 10 \text{ marks})$$

2. Define sampling. What are the advantages of probability sampling? Briefly discuss the various types of probability sampling methods.

$$(1+2+7 = 10 \text{ marks})$$

3A. What is central tendency? Mention the measures of central tendency with merits and demerits.

$$(1+3+3 = 7 \text{ marks})$$

3B. In a study of depressed patients, it was found that the age at onset of depression for those in dysfunctional families was normally distributed with a mean of 30 years and a standard deviation of 9 years. If a depressed person is selected at random from a dysfunctional family, find the probability that the patient was

i)   more than 21 years   ii.   Between 21 and 48 years.

(3 marks)

4. Define health information system. What are its uses? Mention the sources of health information system.

$$(1+3+6 = 10 \text{ marks})$$

5. Write short essays on:

$$(5 \times 8 = 40 \text{ marks})$$

5A. Scales of measurement.

5B. Basic concepts of research.

5C. Role of diagrammatic presentation of data.

5D. Normal distribution.

5E. Concept of health and diseases.

5F. Hospital Statistics.

5G. Descriptive Epidemiological methods.

5H. Correlation with scatter diagram.

༺༄༅༄༅༆༻

Reg. No.										

MANIPAL ACADEMY OF HIGHER EDUCATION
(Deemed University)

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – JUNE 2005
SUBJECT: SQUINT AND BINOCULAR VISION
Thursday, June 16, 2005

Time: 3 Hrs.   Max. Marks: 80

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

1.   You have a boy of 5 years with a diagnosis of amblyopia (OS) from his prior ophthalmic consultation in your clinic. Discuss about the condition and the different treatment modalities available.

(20 marks)

2.   Elaborate on classification, signs and symptoms, diagnosis and treatment modalities of comitant esodeviations.

(20 marks)

3.   Write short notes on:

(8×5 = 40 marks)

3A.   Dissociated vertical divergence.

3B.   Brown syndrome.

3C.   ARC.

3D.   Define binocular vision and brief on the grades of BSV. List the pre-requisites for development of binocular vision.

3E.   Special tests for incomitant squint.

MANIPAL ACADEMY OF HIGHER EDUCATION
(Deemed University)

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – JUNE 2005
SUBJECT: CONTACT LENS
Friday, June 17, 2005

Time: 3 Hrs.   Max. Marks: 80

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

1. What will be the handling instructions that you would be giving your patient on dispensing his initial contact lens?

    (20 marks)

2. What are the indications and contra-indications of contact lens?

    (20 marks)

3. Answer the following.

3A. List the designs of bifocal contact lenses. Discuss monovision fitting in terms of:

    i)   patient selection   ii)   fitting procedures   iii)   possible adaptation problems

3B. What are the characteristics a material should ideally have for contact lenses? List 5 criteria for a successful contact lens fit.

3C. Ignoring any effects of the contact lens on the tear layer, what power contact lens would be required for a patient whose refraction at a vertex distance of 12 mm was -11.50/ -1.50 × 180°? Does a myope have to use more or less accommodation while wearing contact lenses than while wearing glasses? Of what importance is this for a myopic presbyope?

3D. Explain in detail on how you would dispense a toric soft contact lens.

3E. In regard to gaint papillary conjunctivitis occurring as a result of hydrogel lens wear what are patient symptoms? What are the clinical signs? What is the probable mechanism responsible for the condition?

    (8×5 = 40 marks)

Reg. No.													

MANIPAL ACADEMY OF HIGHER EDUCATION
(Deemed University)

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – JUNE 2005

SUBJECT: OCULAR DISEASES + EYE AND SYSTEMIC DISEASES
Monday, June 20, 2005

Time: 3 Hrs.   Max. Marks: 80

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

1. Write briefly anatomy and pathophysiology of lens, developmental defects and its management.

(20 marks)

2. Describe various methods of examining the retinal detachment and briefly write about the management.

(20 marks)

3. Answer all the following:

(8×5 = 40 marks)

3A. Describe different methods to check the patency of the lacrimal system.

3B. Write briefly about therapeutic principles in treating the corneal ulceration.

3C. "Tear function tests".

3D. Normal pupillary reflex of Refractive Afferent Pupillary Defect.

3E. Glaucoma screening.

MANIPAL ACADEMY OF HIGHER EDUCATION

(Deemed University)

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – JUNE 2005

SUBJECT: LOW VISION AIDS
Tuesday, June 21, 2005

Time: 1½ Hrs.   Max. Marks: 40

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

1. Give an account of your patient evaluation & management of a 10 year old patient with a refractive error of $-2.00D/-8.00D \times 40°$ diagnosed to have albinism.

(20 marks)

2A. What are the charecterestics of spectacle lens & also discuss the different forms available in low-vision practice?

2B. How would you identify a successful low- vision patient ? What are the several aspects of the low – vision definition?

(10+10 = 20 marks)

꧁꧂꧁꧂

Reg. No.										

MANIPAL ACADEMY OF HIGHER EDUCATION
(Deemed University)

THIRD YEAR B.Sc. OPTOMETRY DEGREE EXAMINATION – JUNE 2005

SUBJECT: GERIATRIC OPTOMETRY AND PAEDIATRIC OPTOMETRY
Wednesday, June 22, 2005

Time: 1½ Hrs.   Max. Marks: 40

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

1. Discuss the examination of a preschool child.

(20 marks)

2. Discuss the structural & physiological changes in the retina of importance to geriatric population?

(15 marks)

3. What are the treatment modalities in presbyopia?

(5 marks)

✿✿✿✿✿