Reg. No.										

MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST YEAR MASTER OF OPTOMETRY DEGREE EXAMINATION – MAY/JUNE 2018

SUBJECT: PAPER – II: PAEDIATRIC OPTOMETRY & VISION THERAPY

(2015 BATCH)

Saturday, June 02, 2018

Time: 10:00 – 13:00 Hrs. Maximum Marks: 80

- **Answer ALL questions.**
- **Draw diagrams or flowcharts wherever necessary.**

1. **Write short notes:**

1A. Sensory adaptations to strabismus and common tests to rule it out.

1B. Heredo Macular Disorders of childhood.

1C. Vision therapy for exodeviations.

1D. Contact Lens options and lens availability for infants and toddlers.

1E. Describe congenital glaucoma under the following headings-classification, clinical features and differential diagnosis.

1F. Trochlear Nerve palsy-clinical features and management.

1G. Myopia control options as per the recent literature and the future direction. Summarize the results obtained from various studies.

1H. Persistent Hyperplastic Primary Vitreous.

(5 marks × 8 = 40 marks)

2. **Answer the following:**

2A. Write on ICROP in detail. Brief on the pathogenesis and the management options.

(10 marks)

2B. Elaborate on your refraction techniques, management and review for the following cases:

i) High myopia for a 3 year old child.

ii) Unilateral aphakia for a 6 month old.

iii) Albinism with refractive error for a 10 year old.

(10 marks)

- **Essay:**

3. Elaborate on the visual acuity charts used in pre-schoolers with its merits and demerits. What are the amblyogenic factors that has to be detected in pre-school vision screening according to AAPOS?

(17+3 = 20 marks)

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MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST YEAR MASTER OF OPTOMETRY DEGREE EXAMINATION – MAY/JUNE 2018

SUBJECT: PAPER – III: OCCUPATIONAL OPTOMETRY, PUBLIC HEALTH OPTOMETRY AND ADVANCES IN OPHTHALMIC DISPENSING

(2015 BATCH)

Tuesday, June 05, 2018

Time: 10:00 – 11:30 Hrs. Maximum Marks: 40

✍ **Answer ALL the questions:**

1. Compare and contrast between Cathode Ray Tube Display, the Liquid Crystal Display and the Light Emitting Diode Display.

(10 marks)

2. Comment on various types of sunglass standards in detail.

(10 marks)

3. What are the essential general Visual skills necessary to excel in Sports? How are these visual skills assessed?

(3+7 = 10 marks)

4. Discuss role of optometrist in vision 2020.

(10 marks)

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MANIPAL ACADEMY OF HIGHER EDUCATION

FRIST YEAR MSC. RT / MOPT/MSc. ECG/MSc. CCIT/ MSc. NMT/ MSc. MLT/ MOT/ MSc. RRT & DT/ MASLP

SECOND SEMESTER M.Sc. MRP/MSc. EXERCISE AND SPORTS SCIENCE / M.Sc. MIT/ M.Sc. HIM/M.Sc. CLINICAL PSYCHOLOGY DEGREE EXAMINATION – MAY/JUNE 2018

SUBJECT: ADVANCED BIOSTATISTICS & RESEARCH METHODOLOGY / PAPER IV: RESEARCH METHODOLOGY & BIOSTATISTICS / PAPER IV: EPIDEMIOLOGY & BIOSTATISTICS/ PAPER IV: ADVANCED BIOSTATISTICS & RESEARCH METHODOLOGY / BIOSTATISTICS / ADVANCED BIOSTATISTICS & RESEARCH METHODOLOGY/ ADVANCED BIOSTATISTICS & RESEARCH METHODOLOGY/ STATISTICS & RESEARCH METHODS/RESEARCH METHODOLOGY & BIOSTATISTICS / BIOSTATISTICS/ EPIDEMIOLOGY & BIOSTATISTICS / ADVANCED BIOSTATISTICS & RESEARCH METHODOLOGY

Tuesday, May 29, 2018

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

✍ **Answer ALL the questions.**

1A. Define mean, median, mode, standard deviation and coefficient of variation.

1B. What do you mean by simple random sampling? Explain lottery method in simple random sampling with the help of an example.

(5+5 = 10 marks)

2A. Write two examples of Poisson random variable. Enumerate the properties of Poisson distribution.

2B. Define sampling distribution, standard error and confidence interval. Write two applications of standard error in inferential statistics.

(5+5 = 10 marks)

3A. Briefly explain the steps involved in one way ANOVA.

3B. A research team wants to know the prevalence of anaemia among primary school going children in a rural area in southern India. A previous study conducted few years before in the same population showed that the prevalence of anaemia among primary school children was 15%. What is the minimum sample size required if absolute precision (margin of error) is 3% and confidence level of 95%?

(5+5 = 10 marks)

4. Explain the structure of a research thesis.

(10 marks)

5. A sample of 160 women between 75 and 80 years old were classified into one of two groups based on whether they took Vitamin E supplements at the time of enrolment. Each woman was subsequently given a test to measure cognitive ability. Higher scores on this test indicate better cognition. The average test score amongst 60 women taking vitamin E was 27 with standard

deviation of 6.9 as compared to a mean score of 24 with a standard deviation of 6.2 among 100 women not taking the supplements. The research team wants to know whether the mean scores differ significantly between the two groups.

i) Name the statistical test used for comparing the mean scores between the two groups.
ii) What are the assumptions for this test?
iii) State the null and alternate hypothesis for this test?
iv) Compute the test statistic for this test.
v) State whether the test is one sided or two sided test. Justify your answer.

(1+2+2+4+1 = 10 marks)

6. Explain the design, measure of strength of association, strength and weakness of cohort study design.

(10 marks)

7. **Write short notes on:**

7A. Wilcoxon signed rank test
7B. Cross sectional study design
7C. Logistic regression
7D. Validity of diagnostic tests

(5 marks × 4 = 20 marks)

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MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST YEAR MASTER OF OPTOMETRY DEGREE EXAMINATION – MAY/JUNE 2018

SUBJECT: PAPER – I: LOW VISION AND REHABILITATION

(2015 BATCH)

Thursday, May 31, 2018

Time: 10:00 – 11:30 Hrs. Maximum Marks: 40

✍ **Answer ALL the questions:**

1. Describe Retinitis pigmentosa under following:

1A. Etiology and pathogenesis

1B. Ocular sign and symptoms

1C. Specific low vision management

(3+3+4 = 10 marks)

2. **Write short notes on:**

2A. Contrast sensitivity charts for children with low vision.

2B. Objectives and outcomes of community based rehabilitation.

(5+5 = 10 marks)

3. Write in detail about methods to convert an afocal telescope into tele microscope. A telescope is composed of a +20.00 D objective lens and -40.00 D ocular lens. System is focused for infinity. Determine the following:

3A. Magnification of telescope.

3B. Type and tube length of telescope.

(5+2+3 = 10 marks)

4. Write in detail about orientation and mobility management techniques and devices.

(10 marks)