Reg. No.										

MANIPAL ACADEMY OF HIGHER EDUCATION

FRIST YEAR MASLP / MOT / MSc. MLT / MSc. NMT / MSc. MIT / MSc. RRT & DT / SECOND SEMESTER M.Sc. EXERCISE AND SPORTS SCIENCE / M.Sc. HIM / M.Sc. HHIA / M.Sc. MIT/M.Sc. CLINICAL PSYCHOLOGY DEGREE EXAMINATION – DECEMBER 2017

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

Friday, December 15, 2017

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

✍ **Answer ALL questions.**

1A. What are quartiles? When do we use inter quartile range as a measure of variability?

1B. List the advantages of sampling over census. Give example for non-sampling errors.

(5+5 = 10 marks)

2. If the uric acid values in normal adult males are approximately normally distributed with a mean and standard deviation of 6 and 1 mg percent respectively, find the probability that a randomly selected male will have the uric acid value:

2A. i) Greater than 7

ii) Between 4 and 7

2B. Explain the characteristics of Poisson distribution.

(5+5 = 10 marks)

3. Define the following terms:

3A. i) Power of a test

ii) P-value

iii) Type I and Type II errors

3B. Describe with example the situation in which you would use one-way analysis of variance. What is the null hypothesis tested? List the assumptions.

((1+2+2) + 5 = 10 marks)

4A. Differentiate parametric and non-parametric tests. Explain the situation for Wilcoxon signed rank test.

4B. Explain with example the computation procedure of Chi-square test statistic.

(5+5 = 10 marks)

5A. In a random sample of 60 females above 50 years of age, it was observed that 15 subjects were overweight. Construct a 95% confidence interval for the population prevalence of overweight. (Given Z $1-\alpha/2=1.96$).

5B. Write a short note on Survival Analysis.

(5+5 = 10 marks)

6. Discuss Randomized Controlled trial under:

6A. Basic Design

6B. Basic features

6C. Basic steps

6D. Merits and demerits

(10 marks)

7. Explain the structure of a scientific report.

(10 marks)

8. **Write short notes on the following:**

8A. Case series and case reports.

8B. Predictive values of a diagnostic test.

(5+5 = 10 marks)

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MANIPAL ACADEMY OF HIGHE EDUCATION

FIRST YEAR M.A.S.L.P. DEGREE EXAMINATION – DECEMBER 2017

SUBJECT: SH 102 – CLINICAL LINGUISTICS

(NEW REGULATION)

Saturday, December 16, 2017

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

Answer Any FIVE questions.

1. Describe the Vygotsky and Piaget's view of cognition and language acquisition.

(16 mark)

2A. Discuss the extent of uniqueness of agrammatism.

2B. Differentiate left and right brain.

(8+8 = 16 marks)

3. Discuss the importance and roles of child directed speech.

(16 marks)

4A. Differentiate standard and non-standard dialects.

4B. Elucidate on pidgins and creoles.

(8+8 = 16 marks)

5A. Discuss the relevance of clinical linguistics in a multi-lingual context.

5B. Discuss on the importance of knowledge of client's cultural background in clinical endeavours of an SLP.

(8+8 = 16 marks)

6. Write an essay on second-language acquisition.

(16 marks)

7. **Write briefly on the following:**

7A. Discourse analysis

7B. Nonverbal communication

(8+8 = 16 marks)

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MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST YEAR M.A.S.L.P. DEGREE EXAMINATION – DECEMBER 2017

SUBJECT: SH 103 – SPEECH SCIENCE AND PRODUCTION

(NEW REGULATION)

Monday, December 18, 2017

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

✍ **Answer ALL the questions.**

1. Describe the specific role of the intrinsic muscles of the larynx in pitch and intensity changing mechanism.

OR

2. Describe the chest wall dynamics during speech and singing.

(16 marks)

3. What is the importance of aerodynamic assessment of speech? Describe the various aerodynamic events during speech production.

(16 marks)

OR

4A. How does vowel height affect the nasal airway resistance? Explain with suitable studies.

4B. Discuss the role of tongue in speech production.

(10+6 = 16 marks)

5. How do the open loop models differ from closed loop models? Describe any one open loop model of speech production .

OR

6. Explain and critically evaluate Dell's activation model.

(16 marks)

7. Describe the source filter theory keeping vowel /i/ in mind.

(16 marks)

OR

8A. Describe the acoustic properties of stop consonants.

8B. Differentiate wide band spectrogram from Narrow band spectrogram.

(10+6 = 16 marks)

9A. Discuss the applications of speech synthesis.

9B. Enumerate the acoustic characteristics associated with laughter.

(4+12 = 16 marks)

OR

10. Update on the acoustic parameters measured during infant cry analysis. Briefly describe its relevance in voice assessment.

(16 marks)

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MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST YEAR M.A.S.L.P. DEGREE EXAMINATION – DECEMBER 2017

SUBJECT: SH 107 – AUDITORY PHYSIOLOGY

(NEW REGULATION)

Tuesday, December 19, 2017

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

Answer ALL questions.

1. Elaborate on the anatomy and resonance properties of the pinna and EAM.

OR

2. Middle ear acts like a box cavity. Discuss.

(16 marks)

3A. Discuss the phenomena indicating nonlinear behavior of cochlea.

3B. Discuss the role of OHC and IHC in hearing.

OR

4A. Describe the macromechanics of cochlea.

4B. Discuss the blood supply to the cochlea.

(8+8 = 16 marks)

5A. What is action potential? How does it help in differencial diagnosis?

5B. Explain the vestibular spinal reflex with its clinical significance.

OR

6A. Discuss frequency and intensity coding at the level of auditory nerve.

6B. Discuss the anatomy of semi-circular canals.

(8+8 = 16 marks)

7A. Describe how intensity is coded at the higher brainstem structures for hearing.

7B. Discuss the various phenomenon taking place at cochlear nucleus.

OR

8A. Discuss the role of central auditory system in localization.

8B. Discuss the role of neurotransmitters present at the level of brainstem.

(8+8 = 16 marks)

9. Elaborate on complex signal coding at the level of auditory cortex.

OR

10. Outline the anatomy and tonotopic organization of primary and secondary auditory areas.

(16 marks)