Reg. No.										

MANIPAL ACADEMY OF HIGHER EDUCATION

(Deemed University)

FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – AUGUST 2006

SUBJECT: INTRODUCTION TO SPEECH AND LANGUAGE PATHOLOGY (B.1.1.1)

Monday, August 14, 2006

Time: 3 Hrs. Max. Marks: 80

- **Question no. 1 is compulsory.**
- **Answer any FOUR from the rest.**

1A. **Fill in the blanks**:

i) The manner of articulation of /m/ is ____.

ii) The integer multiples of fundamental frequency are ____.

iii) Superficial layer of vocal cord is covered by ___ epithelium.

iv) Angle of the thyroid cartilage in males is ___ degree.

v) HNR is usually ___ in normal.

vi) All the muscles of the tongue are supplied by hypoglossal nerve except ___ muscle.

vii) The change in the length and shape of the vocal tract results in change in the ___.

viii) Word order is represented by a linguistic component known as ___.

ix) Fluency development completes by the age of ___.

x) A leaf like structure in the larynx is ___.

(10 marks)

1B. Write in not more than 2-3 sentences.

i) Competence vs performance in language.

ii) Dyslexia vs dyspraxia.

iii) Paralinguistic vs nonlinguistic aspects.

(2×3 = 6 marks)

2A. What are the important assumptions of source filter theory?

2B. Describe the acoustic characteristics of normal voice.

(10+6 = 16 marks)

3A. How do you classify language disorders in children?

3B. Explain the speech and language characteristics of children with congenital severe hearing impairment.

(6+10 = 16 marks)

4A. What are the functions of the larynx?

4B. Describe the structural and functional changes in the larynx in senescence.

4C. Explain the pitch changing mechanism of larynx.

(4+6+6 = 16 marks)

5A. What is misarticulation?

5B. Explain the various speech characteristics of dysarthria.

5C. List the various problems of children with cleft lip and palate.

(4+6+6 = 16 marks)

6. Write short notes on:

6A. Sign language.

6B. Hypoglossal nerve.

6C. Thyroid cartilage.

6D. Autism.

(4×4 = 16 marks)

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MANIPAL ACADEMY OF HIGHER EDUCATION

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FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – AUGUST 2006

SUBJECT: INTRODUCTION TO AUDIOLOGY (B.1.2.1)

Wednesday, August 16, 2006

Time: 3 Hrs. Max. Marks: 80

Answer FIVE questions in all. Question no. 1 is compulsory.

1A. Write in not more than two sentences.

i) TDH39 ii) Acoustic radiation iii) Loudness iv) RETSPL v) GSI 61

(2×5 = 10 marks)

1B. Match the following:

i)	Travelling wave	a)	Tonndorf
ii)	Telephone theory	b)	Carhart
iii)	Distortion mode	c)	Helmholtz
iv)	Place theory	d)	Bekesy
v)	Compressional mode	e)	Rutherford
vi)	Father of audiology	f)	Herzog

(1×6 = 6 marks)

2A. With the help of block diagram describe a two channel audiometer.

2B. Explain the most accepted method of obtaining pure tone threshold for a hearing impaired individual.

(8+8 = 16 marks)

3. With the help of schematic diagram, briefly explain the transformer action of middle ear.

(16 marks)

4A. How do you classify hearing loss?

4B. Explain any six syndrome associated with SN hearing loss.

(6+10 = 16 marks)

5A. Define IA. Explain the various factors that can effect IA.

5B. Critically evaluate any two methods of obtaining masked thresholds.

(8+8 = 16 marks)

6A. Write in detail about audiometric Weber and Bing test.

6B. Discuss the merits and demerits of biological calibration.

(8+8 = 16 marks)

7. Write short notes on any **FOUR.**

7A. Phone and Sone

7B. Equal loudness contour

7C. Tympanic cavity

7D. Organ of balance

7E. Otosclerosis.

(4×4 = 16 marks)

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MANIPAL ACADEMY OF HIGHER EDUCATION

(Deemed University)

FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – AUGUST 2006

SUBJECT: BASIC ACOUSTICS AND ELECTRONICS (B.1.3.2)

Friday, August 18, 2006

Time: 3 Hrs. Max. Marks: 80

- **ANSWER SECTIONS A & B IN TWO SEPARATE ANSWER BOOKS.**
- **Answer ALL questions.**
- **Draw diagrams and flow charts wherever appropriate.**

SECTION – A: BASIC ACOUSTICS : 40 MARKS

1. Fill in the blanks:

(1×10 = 10 marks)

1A. As the temperature is increased the velocity of sound _____.

1B. The frequency of drum's membrane is directly related to the _____ of the membrane and inversely related to its radius, density and _____.

1C. Particle acceleration ____ particle velocity by _____.

1D. The rate at which sound energy is transferred through the medium is called _____.

1E. As the sound intensity increases multiplicatively by 10, relative intensity _____ additively by 10 dB.

1F. If a signal with SPL = 70 dB is presented against a background noise with SPL = 66 dB, then S/N = _____ dB.

1G. White noise has a pressure spectrum level slope _____ dB/Octave.

1H. Attenuation rate for idealized rectangular filter is _____.

1I. Mach number is the ratio of the speed of _____ to the speed of _____.

1J. Diffraction is more efficient when the wavelength of the sound wave is _____ than the size of the obstacle.

2. Answer any **TWO** of the following:

2A. Define the following:

i) maximum amplitude, ii) rms amplitude, iii) full wave rectified average amplitude, iv) mean square amplitude, v) half wave rectified amplitude.

2B. Explain with a neat sketch, the propagation of wave of disturbance in air when a tuning fork is excited.

2C. Explain sound pressure level and decibels for sound pressure. What is the intensity level (re: 10^{-12}watt/m^2) of a sound with an intensity of 2 x 10^{-6} watt/m^2? Given: $\log_{10}2 = 0.301$.

(5×2 = 10 marks)

3. Answer any **FIVE** of the following:

3A. Explain the vibratory motion of a spring mass system.

3B. Define mass reactance and compliant reactance. Discuss their variations as a function of frequency.

3C. Explain the laws of logarithms with an example each.

3D. What do negative decibels mean? ii) What does 0 dB SPL mean? iii) What are the characteristics of pendular motion? iv) The amplitude of the 5th harmonic of a saw tooth wave is −14dB relative to the amplitude of the fundamental frequency. What is the relative amplitude of the tenth harmonic?

3E. Define a square wave. Explain its waveform, amplitude spectrum and phase spectrum.

3F. Explain the following parameters of a filter with suitable filter curves.
i) natural frequency (f_c), ii) upper cut off frequency (f_u), iii) lower cut of frequency (f_l), iv) band width (Δf)

3G. Explain how reflection of sound wave takes place at convex and concave surfaces.

(4×5 = 20 marks)

SECTION – B : BASIC ELECTRONICS: 40 MARKS

4. Fill in the blanks:

(10×1 = 10 marks)

4A. Two metals are given. One is silver and another is copper. The _____ has highest conductivity.

4B. In resistance colour coding the value of 5 is represented by _____ colour.

4C. The barrier potential for a silicon diode is approximately _____ volts.

4D. The sound level meter is used for determination of _____

4E. The current through a p-n junction is negligible when the junction is _____ biased.

4F. An example of non volatile memory is _____

4G. The p – type impurity is called _____ impurity.

4H. The screen of the cathode ray oscilloscope is coated with _____.

4I. _____ converts electrical signal to sound signal.

4J. For a flat frequency response, the recording should use the _____ technique.

5. Answer any **FIVE** of the following:

5A. Distinguish between intrinsic and extrinsic semiconductors.

5B. What is zener breakdown? Explain the working of a zener voltage regulator.

5C. With relevant sketches, explain the working principle of oscillator. Mention the advantages of crystal oscillator.

5D. Explain the construction and working of dynamic loud speaker.

5E. Draw and explain the block diagram of microprocessor system.

5F. With a neat circuit diagram explain two stage RC coupled amplifier.

5G. Write short notes on:
i) Sound level meter ii) Cathode Ray Tube (CRT)

(6×5 = 30 marks)

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MANIPAL ACADEMY OF HIGHER EDUCATION

(Deemed University)

FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – AUGUST 2006

SUBJECT: INTRODUCTION TO LINGUISTICS (B.1.3.3)

Saturday, August 19, 2006

Time: 3 Hrs. Max. Marks: 80

1. What are the main branches of linguistics? What are their uses?

OR

Name a few varieties of a language.

(10 marks)

2. What are the factors helping to understand the meaning of a language?

OR

What is Transformational grammar? What does Chomskey mean by competence and performance?

(10 marks)

3. Explain briefly the manner and place of articulation of English consonants.

OR

In what ways phonetics and phonemics and phonemes are different?

(10 marks)

4. What is an allophonic variant? Show the variations of two plosive and two fricative phonemes of English.

OR

Draw a diagram of the tongue and name the parts. In what ways lips are useful in producing a few phonemes of English.

(10 marks)

5. Write short notes on any **SIX** of the following:

5A. Chomsky's theory
5B. dialect
5C. Indian English
5D. approximants
5E. Pure vowels
5F. intonation
5G. homophone
5H. Phrase marker
5I. allophone
5J. register

(3×6 = 18 marks)

6. Write short answers for the following and differentiate:

6A. Tense sound and lax sound

6B. Egressive and ingressive air stream

6C. Nasal sound and nasalization

6D. Phonological conditioning and morphological conditioning

(1×4 = 4 marks)

7. Write whether the following statements are true or false:

7A. During the articulation of English consonants /b/ /l/ /n/ the vocal cords do not vibrate.

7B. In English 'dark' /l/ occurs only finally in a word.

7C. There is a difference in pronunciation between rise and rice.

7D. The final sound in pushed is voiceless.

7E. Post and boast would form a minimal pair.

7F. In the word Sunday the stress falls on the second syllable.

7G. A clause contains a finite verb.

(1×7 = 7 marks)

8. Fill in the blanks using the right word.

8A. _____ is bilabial nasal sound.

8B. Yes/No questions are normally said with a _____ intonation.

8C. _____ is a high front unrounded vowel.

8D. The end of a syllable is called _____.

8E. The maximum cluster of consonants in an initial position in English is _____.

(1×5 = 5 marks)

9. Transcribe the following words phonemically using BBC pronunciation:

9A. mango

9B. mind

9C. coat

9D. duck

9E. said

9F. girl

9G. hate

9H. teacher

9I. jug

9J. song

9K. green

9L. card

(½×12 = 6 marks)

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MANIPAL ACADEMY OF HIGHER EDUCATION

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FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – AUGUST 2006

SUBJECT: PSYCHOLOGY RELATED TO SPEECH AND HEARING (B.1.3.4)

Monday, August 21, 2006

Time: 3 Hours Max. Marks: 80

Answer any EIGHT of the following. All questions carry equal marks.

1. What are the different perspectives of normality? Highlight the ideal perspective with the help of suitable examples.

2. Define clinical psychology. Explain its applications in the field of speech and hearing.

3. Discuss the Indian concept of mental illness.

4. Discuss the physical development during early childhood and adolescence.

5. What are the existing systems of classification in psychiatry? Mention the scheme of classification according to ICD-10.

6. What is learning? Explain any one of the conditioning principles to account for learning.

7. What are neurotic disorders? Enumerate any three behavioral techniques that can be used in their treatment.

8. Discuss the stages of language development. Explain the role of learning in language development.

9. Explain the following:

9A. Biological aspects of memory.

9B. Psychosocial theory of personality development.

10. Write short notes on any **TWO** of the following:

10A. Psychodynamic model of mental illness.

10B. Personality assessments.

10C. Attachment.