MANIPAL UNIVERSITY

FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – AUGUST 2008

SUBJECT: INTRODUCTION TO AUDIOLOGY (B.1.2.1)

Monday, August 25, 2008

Time: 3 Hrs.   Max. Marks: 80

✍ **Answer any FIVE questions. Question no 6 is compulsory.**

1.   60 dB SPL + 60 dB SPL is not equal to 120 dB SPL. Prove this statement and justify each step.

(16 marks)

2A. Explain MAP, MAF and their application.

2B. Write a note on Binaural hearing and Head shadow effect.

(8+8 = 16 marks)

3A. Explain cochlear anatomy with neat diagrams.

3B. Compare and contrast IHCs and OHCs.

(8+8 = 16 marks)

4.   Write an essay on cochlear potentials.

(16 marks)

5.   Describe the various methods used for masking, their advantages and disadvantages.

(16 marks)

6.   Write short notes on any **FOUR** of the following:

6A. NIHL

6B. Central Auditory Pathway

6C. RETSPL

6D. Schwabach test

6E. Equal loudness contours

(4×4 = 16 marks)

MANIPAL UNIVERSITY

FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – AUGUST 2008

SUBJECT: BASIC HUMAN ANATOMY AND PHYSIOLOGY

Tuesday, August 26, 2008

Time: 3 Hrs.   Max. Marks: 80

✐   Answer Sections "A" and "B" in TWO Separate answer books.

✐   Draw diagrams and flow charts wherever appropriate.

SECTION – A: ANATOMY: 40 MARKS

1.   Describe the attachments, nerve supply and actions of the intrinsic muscles of the larynx.

(10 marks)

2.   Write briefly on:

2A. Development of the palate and its anomalies.

2B. Auditory pathway.

(5×2 = 10 marks)

3.   Write short notes on:

3A. Organ of Corti.

3B. Tympanic membrane.

3C. Coronary arteries.

3D. Thyroid cartilage.

3E. Constrictor muscles of the Pharynx.

(4×5 = 20 marks)

SECTION – B: PHYSIOLOGY: 40 MARKS

4.   Write Short notes on:

4A. Impulse originating and conducting system in heart.

4B. Formation and functions of saliva.

4C. Classification and properties of sensory receptors.

4D. Organ of Corti.

4E. Diabetes mellitus.

(5×5 = 25 marks)

5. Write brief answers to the following:

5A. Mention the two divisions of autonomic nervous system and mention the function of each division.

5B. Define 'anatomical dead space'. Mention the normal volume of the same.

5C. What is 'neutrophilia'? Give two condition causing neutrophilia.

5D. Give the normal human body temperature. Mention two changes that take place when one is exposed to cold environment.

5E. Mention the source and two actions of testosterone.

(2×5 = 10 marks)

6. Indicate whether the following statements are **TRUE or FALSE**:

6A. Individuals with blood group O contain antigen A and B on their red cell membrane.

6B. Corpus luteum secretes progesterone.

6C. Cerebellar lesions cause ataxia.

6D. Glucose is completely reabsorbed from renal tubules normally.

6E. Second heart sound is caused due to closure of mitral and triscuspid valves.

(1×5 = 5 marks)

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MANIPAL UNIVERSITY
FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – AUGUST 2008
SUBJECT: INTRODUCTION TO LINGUISTICS (B.1.3.3)

Wednesday, August 27, 2008

Time: 3 Hrs.   Max. Marks: 80

✎   **For Clarity provide examples, illustration, etc. where possible.**

1.   With natural limitations, animal communication cannot compare with human communication. Discuss human communication.
OR
What is linguistics? Discuss any five branches of linguistics.

(10 marks)

2.   What is morphology? What are the various kinds of morphemes?
OR
What are the peculiarities of English graphomics?

(10 marks)

3.   How are the vowel phonemes made? How do you explain a vowel? Describe the vowel / i: / as in <u>seat</u>.

(10 marks)

4.   What are phonemes? Explain the allophonic variants of plosives. What is allomorph? Give examples.

(10 marks)
OR
4.   What are the following?
4A. Intonation
4B. Syllabic consonants
4C. Triphthongs
4D. Articulators

(2½×4 = 10 marks)

5.   Write short notes on any **FIVE** of the following:
5A. Standard English
5B. Plosives
5C. Langue and parole
5D. Diacritics
5E. Paradigm
5F. Child language
5G. Primary and secondary stress

(3×5 = 15 marks)

6.   Identify the true and false statement with reference to linguistics.
6A. An adjective describes the noun it is followed by.
6B. Affixes are bound forms.
6C. There are four bilabial phonemes in English phonemic system.
6D. When vocal cords vibrate, voiceless phonemes are articulated.

6E. 'When it rains, please bring the washing' is a complex sentence.
6F. 'Flap' and 'tap' have similar meaning.
6G. 'Check and cheque' constitute a minimal pair.
6H. IPA is an abbreviation for International Phonetic Alphabet.
6I. Creole is the improved variety of pidgin.
6J. A phrase is a group of words which functions as a noun, adverb or adjective.

<div align="right">(½×10 = 5 marks)</div>

7. Fill in the blanks using appropriate words:
7A. The name of the letter O is not a short vowel, it is a _____.
7B. The r's in cherry is a _____.
7C. One word having several meaning is _____.
7D. 'Bluebird' is a _____ word.
7E. 'Ask, it will be given to you' is a _____ sentence.
7F. 'Unloaded' has _____ morphemes.
7G. 'She made me cry' – In this sentence there are _____ content words.
7H. / s z ʃ ʒ tʃ and dȝ / are called _____.
7I. The three central vowels in English phonemic system are _____.
7J. When a consonant functions as a syllable it is called _____.

<div align="right">(½×10 = 5 marks)</div>

8. What do the following mean? Explain briefly:
8A. Clause
8B. Assimilation
8C. Distinctive features of /n/ and /p/.

<div align="right">(2×3 = 6 marks)</div>

9. Match the following:

i)	feel	a)	notation
ii)	lower lip	b)	phonemics
iii)	morph	c)	back rounded vowel
iv)	transcription	d)	consonant cluster
v)	phonetics	e)	subordinating conjunction
vi)	top	f)	zero morpheme
vii)	scratch	g)	pure vowel
viii)	if	h)	accent
ix)	two sheep	i)	smallest meaningful word
x)	stress	j)	active articulator

<div align="right">(½×10 = 5 marks)</div>

10. Give the phonemic transcription of the following:
10A. buns
10B. booked
10C. stone
10D. fever
10E. order
10F. selfish
10G. thumb
10H. powder

<div align="right">(½×8 = 4 marks)</div>

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MANIPAL UNIVERSITY

FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – AUGUST 2008

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

Thursday, August 28, 2008

Time: 3 Hrs.   Max. Marks: 80

✍ **Question No. 1 is compulsory. Answer any FOUR from the rest.**

1A. **Fill in the blanks:**
  i)   Angle of thyroid cartilage in females is _____ degree.
  ii)   Second formant frequency is related to tongue _____
  iii)   All the cranial nerves originate at the level of _____
  vi)   All the muscles of tongue are supplied by hypoglossal nerve except _____ muscle.
  v)   Word order forms the _____ component of language.
  vi)   Broca's Aphasia is classified under _____ type of aphasia.
  vii)   _____ connects Wernicke's area with Broca's area.
  viii) REEL scale is given by _____ and _____
  ix)   Motor clumsiness is one of the salient features seen in _____ children.
  x)   Psycho acoustical correlate of frequency is _____
1B. Write in not more than 2-3 sentences.
  i)   Active articulators Vs Passive articulators.
  ii)   Quiet Breathing Vs Speech Breathing.
  iii)   Wernicke's area Vs Broca's area.

                                                                                                    (10+6 = 16 marks)

2A. What is autism?
2B. Discuss briefly the characteristics of children with autism.
2C. Enlist the team members in the assessment of a child with autism.
                                                                                                    (2+10+4 = 16 marks)

3A. Define aphasia.
3B. Write a note on the classification of aphasia.
3C. What is a diagnostic report?
                                                                                                    (2+8+6 = 16 marks)

4A. Discuss the functions of intrinsic and extrinsic laryngeal muscles.
4B. List the different cranial nerves with their functions.
                                                                                                    (8+8 = 16 marks)

5A. Explain the development of semantic functions from infancy till 2 yrs.
5B. Discuss the development of communicative intent.

                                                                                                    (8+8 = 16 marks)

6.   Write short notes on:
6A. NNF
6B. Short term goals in language therapy.
6C. MIDVAS
6D. Speech chain.

                                                                                                    (4×4 = 16 marks)

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MANIPAL UNIVERSITY

FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – AUGUST 2008

SUBJECT: BASIC ACOUSTICS AND ELECTRONICS (B.1.3.2)

Friday, August 29, 2008

Time: 3 Hrs.   Max. Marks: 80

✍ Answer sections "A" and "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:

1A.   Musical sound and noise can be differentiated based on _____.

1B.   The velocity of the particle executing simple harmonic motion is _____ at its equilibrium position.

1C.   Phon is not a measurement which is directly proportional to loudness where as _____ is a scale directly proportional to loudness.

1D.   The emphasized harmonic groupings that occur in the frequency region of the Vocal tract resonances are called _____.

1E.   A transducer capable of converting electrical energy into acoustic energy is called _____.

1F.   The molecules in an air column with standing waves oscillate most vigorously at points called _____.

1G.   As the absorption coefficient increases sound wave reflection _____ and reverberation time _____.

1H.   Sound travels through air in the form of _____ waves.

1I.   It is usually preferable to describe a sound wave as a pressure wave because the pressure add like _____.

1J.   Two sounds whose intensity ratio is 2 differ in sound level by _____.

                                                                                          (1×10 = 10 marks)

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

2A.   Define a square wave. Explain its waveform, amplitude spectrum and phase spectrum.

2B.   Explain resonance. Explain the effects of impedance on a resonance curve.

2C.   Discuss the vibratory motion of a tuning fork, explaining in detail the role of applied, inertial and elastic restoring forces.

                                                                                          (5×2 = 10 marks)

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

3A.   i)   Compare longitudinal wave with transverse wave.
      ii)   Why will sound not travel through a vacuum?
      iii) List some sources of infrasonic waves and of ultrasonic waves.

3B.   i)   Define uniform circular motion.
      ii)   Define the following:
            a)   peak–peak amplitude
            b)   RMS amplitude
            c)   mean square amplitude.

3C. Define the following:
   i)   Bel
   ii) decibel (Intensity level, IL)
   iii) decibel (Sound Pressure Level, SPL)
   iv) phon

3D. A complex periodic waveform is composed of two frequencies, each of which has a starting phase of 0°. For one component frequency $f_1 = 100$ Hz and the peak amplitude = 2V. For the second component frequency $f_2 = 200$ Hz and the peak amplitude = 1V. After 5 ms what will be the instantaneous voltage of the resultant wave?

3E. 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)

3F. Explain how stationary waves are produced. Compare stationary waves with progressive waves.

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:

4A. A _____ is a device which supplies current to a load at constant voltage independent of the variations in its input voltage.

4B. Energy is expressed in _____.

4C. _____ amplifier has variable bias current.

4D. The _____ microphone is quite sensitive to the movement of the air surrounding it.

4E. Loudspeaker impedance must be matched to impedance of the _____ for power efficiency and low distortion.

4F. A loud speaker designed to produce low-frequency sound is called _____.

4G. _____ eliminates unwanted tape hiss and noise.

4H. _____ expresses the ability of a receiver to reject the weaker of two signals on the same channel.

4I. A bus is a common group of wires used to interconnect the _____ and _____ with the CPU.

4J. _____ can make low level speech more intelligible and high level sounds more comfortable.

$(1×10 = 10$ marks$)$

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

5A. With circuit diagram and graph explain different types of passive filters.

5B. With a neat diagram explain the working of carbon microphone.

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

5D. How does the Dolby noise-reduction system work? Explain.

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

5F. Which type of distortion is produced by clipping the waveform peaks? With neat diagrams explain harmonic, intermodulation and transient distortion.

5G. With neat diagrams explain the spectrum analyzer. Explain its applications.

$(6×5 = 30$ marks$)$

MANIPAL UNIVERSITY

FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – AUGUST 2008

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

Saturday, August 30, 2008

Time: 3 Hours   Max. Marks: 80

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

1. Describe any two methods of study in clinical psychology delineating their merits and demerits.

2. Define personality. Discuss any two theories of personality.

3. Discuss the various perspectives of Normality and Abnormality.

4. Outline the role of learning in speech and language acquisitions.

5. Discuss any four behavior therapy techniques employed in the management of speech and language disorders.

6. Briefly delineate the various theories of language development.

7. Describe Kohlberg's theory of moral development.

8. Discuss the scope of psychological assessment and outline any two tests of intelligence.

9. What is classical conditioning? Outline the principles of classical conditioning.

10. Write short notes on any **TWO** of the following:
10A. Physical development during adolescence.
10B. Observational learning.
10C. Piaget's model of cognitive development.