

MANIPAL UNIVERSITY

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

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

Monday, June 09, 2008

Time: 3 Hrs.

Max. Marks: 80

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

1A. Fill in the blanks:

- i) Variegated babbling is observed during _____ months.
- ii) Vocabulary of a child at the age of 3 years is approximately _____ words.
- iii) An example of communicative intent is _____.
- iv) Age range for 3 DLAT is between _____ and _____ months.
- v) _____ is an example of speech and language stimulation technique.
- vi) One technique used in Voice therapy is _____.
- vii) Wernicke's area is located in _____ lobe.
- viii) _____ fibers connect the two cerebral hemispheres.
- ix) Cerebellar damage results in _____ speech.
- x) Pitch drop in males during puberty is approximately _____ octave.

1B. Expand the following:

- i) DDK
- ii) MPD
- iii) KAT
- iv) OSME
- v) SODA
- vi) ADHD

(10+(1×6) = 16 marks)

2A. Briefly describe the scopes for speech and language professionals.

2B. Briefly discuss the characteristics of a good speaker.

(10+6 =16 marks)

3A. Define Phonology.

3B. Explain the phonological development in children.

(4+12 =16 marks)

4A. Explain stuttering with its causes.

4B. Discuss the speech and language characteristics of a child with congenital hearing impairment.

(6+10 =16 marks)

5A. Discuss the different stages of speech and language development.

5B. Briefly explain the cognitive basis of speech.

(10+6 =16 marks)

6. Write short notes on:

- 6A. Informal assessment
- 6B. Misarticulation
- 6C. Counseling
- 6D. Vagus nerve.

(4×4 =16 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – JUNE 2008****SUBJECT: BASIC ACOUSTICS AND ELECTRONICS (B.1.3.2)**

Tuesday, June 10, 2008

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.
- 1A. Supersonics are the sound waves of frequency more than _____.
- 1B. The physiological quantity which distinguishes between a shrill sound and a grave sound is _____.
- 1C. Momentum is _____ with velocity and elasticity is _____ with displacement.
- 1D. Maximum intensity of sound that the human ear can tolerate without sensation of pain is _____.
- 1E. The waveform of the sound produced by the vibrating vocal folds is approximately _____.
- 1F. An octave corresponds to _____ or _____ of frequency.
- 1G. Human auditory system is an example for _____ tuned system.
- 1H. A pressure anti-node, a point of maximum pressure corresponds to a displacement _____ and is located at the _____ end of the tube.
- 1I. If the impedance offered by the obstacle is _____ the intensity of the reflected wave will equal the intensity of the incident wave.
- 1J. A transducer capable of converting electrical energy into acoustic energy is called _____.
(1×10 = 10 marks)
2. Answer any **TWO** of the following.
- 2A. Discuss the vibratory motion of a tuning fork, explaining in detail the role of applied, inertial and elastic restoring forces.
- 2B. What are filters? Explain the following types of filters with suitable filter curves
i) low-pass ii) high-pass iii) band pass iv) band reject
- 2C. Explain Doppler effect. Obtain expressions for the apparent frequency of the sound heard when,
i) the source is moving towards a stationary observer
ii) the observer is moving towards a stationary source
iii) the source is moving away from the stationary observer.
Mention two applications of Doppler Effect.

(5×2 = 10 marks)

3. Answer any **FIVE** of the following:
- 3A. What is damping? Explain graphically how amplitude varies in low damped, highly damped and critically damped system. Write the expression for damping factor and explain the notations.
- 3B. The equation of a transverse wave traveling along a string is given by,
 $Y = (2.30\text{ mm})\sin[(1822\text{ rad/m})x - (588\text{ rad/s})t]$.
- Find: i) the amplitude, ii) period, iii) the velocity,
 iv) the wavelength of the wave. You may retain your answer in fractions.
- 3C. Explain sound pressure level and decibels for sound pressure.
- 3D. Explain the waveform and amplitude spectrum of a pulse train.
- 3E. Explain resonance. Explain the effects of impedance on a resonance curve
- 3F. What do you mean by distortion of a signal? Explain amplitude distortion. Suggest methods to minimize distortion.
- 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. An example for active circuit element is _____.
- 4B. Theoretical maximum efficiency of Class D amplifier is _____.
- 4C. The disadvantage of crystal oscillator is _____.
- 4D. The condenser microphone has _____ frequency response and low distortion.
- 4E. In speaker the _____ is free to move back and forth but not vertically or laterally.
- 4F. The direct recording method cannot be used to record _____.
- 4G. The Analog to Digital conversion is done by _____ the analog signal many times a second.
- 4H. Clipping of waveform peaks results in _____ distortion.
- 4I. _____ is the branch of electronics engineering which deals with micro-circuits.
- 4J. The sound level meter is used for determination of _____.
- (1×10 = 10 marks)

5. Answer any **FIVE** of the following:
- 5A. With a neat block diagram and waveforms explain the various stages of power supply unit.
- 5B. With circuit diagram and relevant waveforms explain how low pass, high pass and band pass filters can be constructed using only passive components.
- 5C. Explain sensitivity, frequency response, impedance and directionality characteristics of microphones.
- 5D. With a neat diagram explain how does a tape recorder system works.
- 5E. i) What is the advantage of a horn loudspeaker over a cone type loudspeaker?
 ii) With a neat diagram explain the working of Dynamic loud speaker.
- 5F. With the help of a neat block diagram explain super heterodyne receiver.
- 5G. Explain the working principle of Cathode Ray Tube (CRT).
- (6×5 = 30 marks)



MANIPAL UNIVERSITY
FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – JUNE 2008
SUBJECT: BASIC HUMAN ANATOMY AND PHYSIOLOGY

Wednesday, June 11, 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 gross anatomy of the tongue. Give its nerve supply. (6+4 = 10 marks)
2. Write briefly on:
 2A. Sinus (ventricle) of the larynx
 2B. Speech areas (5×2 = 10 marks)
3. Write short notes on:
 3A. Soft palate
 3B. Tympanic membrane
 3C. Cochlear nerve
 3D. Structural abnormalities of chromosomes
 3E. Right atrium (4×5 = 20 marks)

SECTION – B: PHYSIOLOGY: 40 MARKS

4. Write Short notes on:
 4A. Hormones secreted by the anterior pituitary gland.
 4B. Accommodation of human eye.
 4C. Nerve action potential- generation and propagation.
 4D. Sequence of events involved in quiet inspiration and expiration.
 4E. Electrocardiogram. (5×5 = 25 marks)
5. Write brief answers to the following:
 5A. Name two factors essential for spermatogenesis.
 5B. Name any two functions of frontal lobe of brain.
 5C. Define 'peristalsis'. Mention its function.
 5D. Name the protein that converts fibrinogen to fibrin. How is it formed?
 5E. Name two functions of pancreatic juice. (2×5 = 10 marks)
6. Indicate whether the following statements are **True** or **False**.
 6A. Renal blood flow is 250 mL per minute
 6B. Noradrenalin is a vasoconstrictor.
 6C. Cerebellar lesions cause paralysis.
 6D. Antibodies are gamma globulins.
 6E. Osmosis involves transport of water soluble substances across membranes. (1×5 = 5 marks)



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MANIPAL UNIVERSITY
FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – JUNE 2008
SUBJECT: INTRODUCTION TO AUDIOLOGY (B.1.2.1)

Thursday, June 12, 2008

Time: 3 Hrs.

Max. Marks: 80

Answer any FIVE questions. Question no 6 is compulsory.

1. Describe the anatomy and physiology of external ear with a neat diagram. (16 marks)
- 2A. Audiometric zero is not a true zero – discuss. Add a note on why dB scale is necessary.
- 2B. Write a note on phones and sones and Frequency and Intensity. (8+8 = 16 marks)
3. Describe the causes of conductive hearing loss. (16 marks)
4. Describe briefly the principle, procedure and interpretation of audiometric versions of tuning fork tests. (16 marks)
5. With a neat diagram, explain the parts and functions of an audiometer. (16 marks)
6. Write short notes on any **FOUR** of the following:
 - 6A. Shadow gram
 - 6B. Masking stimulus
 - 6C. Naunton's dilemma
 - 6D. Cochlear microphonics
 - 6E. Type I audiometers(4×4 = 16 marks)



- 6I. The antonym of 'young' is 'younger'.
 6J. 'One thing at a time' is a minor sentence.

($\frac{1}{2} \times 10 = 5$ marks)

7. Fill in the gaps using the correct term relating to linguistics:

- 7A. Speech organs are also called _____.
 7B. Linguistics is the _____ study of a language.
 7C. The advocates of structuralism emphasised the importance of _____.
 7D. 'Walking stick – in this, the secondary stress falls on' _____.
 7E. In the word 'photographer' there are _____ syllables.
 7F. In the sentence, 'Leave it to me', the only word that is stressed is _____.
 7G. The dog's tail is not straight – the 's' in dog's is a plural morpheme.
 7H. In the word 'fourth' the final phoneme is a _____ fricative.
 7I. The cluster letters ng in 'singer' is pronounced _____.
 7J. In 'certain' the syllabic consonant is _____.

($\frac{1}{2} \times 10 = 5$ marks)

8. What are the ones given below? Explain them briefly.

- 8A. Open and closed syllable.
 8B. Nasal sounds and nasalization.
 8C. Distinctive features of /k/ and /m/.

($2 \times 3 = 6$ marks)

9. Match the following:

- | | |
|-----------------------------|----------------------|
| i) known | a) primary stress |
| ii) <u>laughter</u> | b) noun |
| iii) goats <u>and</u> sheep | c) derivational |
| iv) <u>sure</u> | d) diphthong |
| v) <u>not</u> | e) adjective |
| vi) foolishness | f) clear l |
| vii) <u>t</u>
<u>ʌ</u> | g) conjunction |
| viii) <u>interrogation</u> | h) onset |
| ix) <u>joker</u> | i) central diphthong |
| x) <u>truthful</u> | j) alveolar nasal |

($\frac{1}{2} \times 10 = 5$ marks)

10. Transcribe into phonemic notation.

- 10A. stronger
 10B. cheerful
 10C. over
 10D. painting
 10E. knotty
 10F. turban
 10G. chemistry
 10H. porridge

($\frac{1}{2} \times 8 = 4$ marks)



MANIPAL UNIVERSITY**FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – JUNE 2008****SUBJECT: PSYCHOLOGY RELATED TO SPEECH AND HEARING (B.1.3.4)**

Saturday, June 14, 2008

Time: 3 Hours

Max. Marks: 80

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

1. Highlight the need for classifying mental disorder. Discuss any of the current systems of classification.
2. Elaborate on physical development from prenatal to adolescence.
3. Discuss Piaget's cognitive development theory.
4. Define temperament and elaborate on Thomas and Chess's Temperament theory.
5. Define Learning and highlight trial and error method of learning.
6. Describe any four techniques based on operant conditioning.
7. Discuss the nature and scope of psychological assessment. Elaborate on tests of memory.
8. Highlight the role of learning in speech and language disorders.
9. Discuss the stages of language development.
10. Write short notes on any **TWO** of the following:
 - 10A. Exposure
 - 10B. Observational learning
 - 10C. Two factor theory of intelligence.

