

MANIPAL UNIVERSITY**FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – JUNE 2011****SUBJECT: BASIC HUMAN ANATOMY AND PHYSIOLOGY
(OLD REGULATION)**

Monday, June 06, 2011

Time: 10.00-13.00 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. Give a detailed account of the gross anatomy of cochlea. (10 marks)
2. **Write briefly on:**
- 2A. Vocal cords
2B. Speech areas (5×2 = 10 marks)
3. **Write short notes on:**
- 3A. Nasal septum.
3B. Paranasal air sinuses.
3C. Oesophagus.
3D. Development of the tongue.
3E. Interior of the right atrium. (4×5 = 20 marks)

SECTION – B: PHYSIOLOGY: 40 MARKS

4. **Answer the following questions:**
- 4A. Mention the cause for Cushing's syndrome. List FOUR clinical features of the same.
4B. Describe white blood cells under the following headings:
i) Normal count ii) Classification
4C. Explain the neural regulation of respiration.
4D. Define cardiac output. Add a note on its regulation. (5×4 = 20 marks)
5. **Answer the following questions:**
- 5A. Draw a labeled diagram of a sarcomere.
5B. Mention any two properties of cardiac muscle.
5C. Draw a labeled diagram of a neuromuscular junction.
5D. What is the normal serum calcium level? Name the hormones that maintain calcium homeostasis.
5E. Name the ascending tracts.
5F. Briefly explain the mechanism of inspiration.
5G. Mention the normal count and list two functions of platelets.
5H. State Landsteiner's law.
5I. Define alveolar ventilation. Give its normal value.
5J. List two clinical features of acromegaly. (2×10 = 20 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – JUNE 2011**

**SUBJECT: INTRODUCTION TO HUMAN COMMUNICATION (B 1.1)
(NEW REGULATION)**

Monday, June 06, 2011

Time: 10.00-13.00 Hours

Max. Marks: 80

1. Explain in not more than 2-3 sentences

- i) Modes of communication
- ii) Cognition
- iii) CSF
- iv) Neuron
- v) Diaphragm
- vi) Vital capacity
- vii) Rima glottis
- viii) Laryngeal ventricle
- ix) Uvula
- x) Vocal tract

(2×10 = 20 marks)

2A. Define communication.

2B. Explain the process of communication.

(4+8 = 12 marks)

OR

2A. Briefly describe the characteristics of a good speaker.

2B. Explain speech as an overlaid function.

(8+4 = 12 marks)

3A. What are the different areas in the brain important for speech and language?

3B. Write a note on Vagus nerve.

OR

3A. Explain the functions of various lobes of cortex with a neat diagram.

3B. UMN vs. LMN.

(8+4 = 12 marks)

4A. List the muscles of inhalation and exhalation. Explain the three dimensions involved in expansion of the thoracic cavity.

4B. Describe different lung volumes.

OR

4A. Differentiate speech breathing from breathing for life.

4B. Asphyxia.

(8+4 = 12 marks)

5A. Explain in detail the development of voice.

5B. Extrinsic Vs Intrinsic muscles of larynx.

OR

5A. Describe the cartilages of larynx with neat diagrams.

5B. Explain the VF structure.

(8+4 = 12 marks)

6A. Explain the acoustic theory of speech production.

6B. Explain the anatomy of mandible.

OR

6A. Briefly describe the extrinsic and intrinsic muscles of lips with functions.

6B. Describe oral cavity.

(8+4 = 12 marks)



MANIPAL UNIVERSITY

FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – JUNE 2011

SUBJECT: BASIC ACOUSTICS AND ELECTRONICS (B.1.3.2) (OLD REGULATION)

Wednesday, June 08, 2011

Time: 10.00-13.00 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. _____ force is responsible for an oscillating body to approach equilibrium.
- 1B. As the sound intensity is doubled, the level is increased by _____
- 1C. Particle acceleration waveform _____ the particle velocity waveform by _____
- 1D. At the natural frequency of the system, impedance is _____ and admittance is _____
- 1E. Decibel can also be defined as 20 times logarithm of a _____ ratio.
- 1F. Mechanical waves can travel through the medium because of the _____ properties of the medium.
- 1G. Energy dissipating component of impedance is called _____.
- 1H. Loudness of sound depends on _____ of vibrating motion.
- 1I. The harmonics of the square wave are _____ integer multiples of fundamental frequency.
- 1J. Force of elasticity is zero when the displacement is _____.

(1×10 = 10 marks)

2. Answer any THREE of the following:

- 2A. What is damping? Explain graphically different types of damped system. Write an expression for damping factor.
- 2B. Define a sawtooth wave. Explain its waveform, amplitude spectrum and phase spectrum.
- 2C. What is precedence effect? Write a note on direct, early and reverberant sound with proper ray diagrams.
- 2D. What are the characteristics of standing waves? How these are formed in a tube (air column) closed at one end and open at the other?

(4×3 = 12 marks)

3. Answer any THREE of the following.

- 3A. How sound intensity is related to sound pressure?
- i) Suppose that the average sound level of human speech is 65db. How many persons in a room speaking at the same time each at 65db are needed to produce a sound level of 80db? Given: $\text{antilog}_{10}1.5=32$
- ii) An intensity level of 65 db (re: 10^{-12} watt/m²) corresponds to what intensity? Given: $\text{antilog}_{10}6.5= 3.16 \times 10^6$.

- 3B. Define simple harmonic motion. Show that simple harmonic motion is projection of uniform circular motion.
- 3C. Explain the acoustic impedance. Explain its components. Describe acoustic impedance with proper phasor diagrams. What is the magnitude of impedance vector?
- 3D. Explain the vibratory motion of a spring mass (block) system.

(6×3 = 18 marks)

SECTION – B : BASIC ELECTRONICS: 40 MARKS

4. Fill in the blanks:

- 4A. _____ is electrical current that reverses its direction many times each second.
- 4B. Inductance opposes rate of change of _____.
- 4C. RAM is a _____ memory.
- 4D. Active filters are constructed from _____.
- 4E. _____ amplifiers are suitable for high-power audio amplifiers.
- 4F. Microphone converts _____ energy into _____ energy.
- 4G. A loudspeaker designed to produce extra-low frequency sound (below the woofer) is called _____.
- 4H. Horn loudspeakers have very high _____.
- 4I. _____ results in harmonic distortion.
- 4J. A _____ is intentionally introduced into electret microphones in order to make the hearing aid less sensitive to intense low frequency sounds.

(1×10 = 10 marks)

5. Answer any FIVE of the following:

- 5A. Classify the filters and explain different types of passive filters.
- 5B. With a neat diagram explain capacitor microphone. Explain directionality and frequency response of a microphone.
- 5C. With a neat diagram explain the working of dynamic loud speaker.
- 5D. With a neat diagram explain how does a tape recorder system works.
- 5E. Draw and explain the block diagram of microprocessor system.
- 5F. With relevant diagrams differentiate between analog and digital signals. Would you consider the audio signal that drives a loud speaker as analog or digital?
- 5G. Write a note on:
- Crossover networks
 - Oscilloscope

(6×5 = 30 marks)



MANIPAL UNIVERSITY
FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – JUNE 2011

SUBJECT: SPEECH-LANGUAGE DEVELOPMENT AND DISORDERS (B 1.2)

(NEW REGULATION)

Wednesday, June 08, 2011

Time: 10.00-13.00 Hours

Max. Marks: 80

1. Explain in not more than 2-3 sentences

- i) Communication
- ii) Phonology
- iii) Compound bilingual
- iv) LAD
- v) Downs syndrome
- vi) Prosody
- vii) Delayed echolalia
- viii) ADD
- ix) Closed head injury
- x) Epilepsy

(2×10 = 20 marks)

2A. Describe development of pragmatics in children.

2B. Describe semantic categories.

OR

2A. Define MLU. Explain stages of MLU development.

2B. Explain the factors influencing communication development.

(8+4 = 12 marks)

3A. Explain the biological maturation theory of language acquisition.

3B. Describe REEL scale.

OR

3A. Describe linguistic theory of language acquisition.

3B. Describe neurological issues in communicative development.

(8+4 = 12 marks)

4A. Discuss the different types of cerebral palsy.

4B. Write a note on seizure disorder.

OR

4A. Discuss the causes of mental retardation.

4B. Explain the classification of MR.

(8+4 = 12 marks)

5A. Explain autism with its etiological factors.

5B. Write a note on Asperger's syndrome.

OR

5A. Describe the role of different team members in the assessment and management of children with ADHD.

5B. Write a note on SECS.

(8+4 = 12 marks)

6A. Define LD. Explain characteristics features of LD.

6B. Etiology of acquired childhood aphasia.

OR

6A. Briefly discuss the speech and language characteristics of children with hearing impairment.

6B. List the factors that need to be considered in the management of hearing impaired.

(8+4 = 12 marks)



MANIPAL UNIVERSITY

FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – JUNE 2011

SUBJECT: INTRODUCTION TO LINGUISTICS (B.1.3.3)

(OLD REGULATION)

Friday, June 10, 2011

Time: 10.00-13.00 Hrs.

Max. Marks: 80

1. Answer any FOUR of the following:

- 1A. What are the various branches of linguistics? Explain five of them in detail.
- 1B. Draw a neat diagram of human speech organs and explain how they are used in articulating English consonants.
- 1C. What is meant by cardinal vowels? How are the vowels produced? How do you describe a vowel? Describe the English vowels /i /i:/ /ɜ:/ /p/ on the above lines.
- 1D. i) What is 'distinctive features'? Explain with examples.
ii) Why does a language change?
- 1E. What do you understand about semantics? Explain with suitable examples.
- 1F. What is lexicology? Write in detail the various ways of forming new words.

(10×4 = 40 marks)

2. Write short notes on any FOUR of the following:

- 2A. Cardinal vowels.
- 2B. language acquisition device.
- 2C. active and passive articulators.
- 2D. Standard English.
- 2E. the tongue.
- 2F. pairs of minimal contrast.
- 2G. allophonic variants of /p/.

(3×4 = 12 marks)

3. Say whether the statements in respect of Linguistics are true or false.

- 3A. A triphthong is a glide from one vowel to another.
- 3B. Secondary cardinals are eight in number
- 3C. In wrong, the final phoneme voiced velar stop.
- 3D. Really!: When it is said in the rising intonation it can mean 'is it so?'
- 3E. In the word minimum there are four nasal phonemes.
- 3F. Closed syllables end with a vowel phoneme.
- 3G. In speech, content words are not stressed.
- 3H. In the English word through there are four phonemes.
- 3I. Hard palate is an active articulator.
- 3J. When look is pronounced /l/ is said with a rounded lips.

(½×10 = 5 marks)

4. Fill in the gaps using the right word:

- 4A. The part of the tongue, when it is at rest, below the hard palate is called _____ of the tongue.
4B. There are _____ phonemes which are plosives.
4C. Tile and tail constitute a _____.
4D. 'As cool as cucumber' is an _____.
4E. In the word written -en is an _____ morpheme.
4F. Mostly, in speech, is sometimes heard without t in it. It is called _____.
4G. _____ linguists study how a language has changed over a period of time.
4H. In the word carelessly, there are _____ morphemes.
4I. /t/ in agreed is a _____.
4J. A person who is able to speak more than two languages is called a _____.
4K. _____ is the shortest vowel phoneme in English.
4L. In a simple sentence the number of finite verb is _____

(1×12 = 12 marks)

5. Match the following:

- | A | B |
|-------------------|------------------------------|
| 5A. bread | i) lax sound |
| 5B. green | ii) phrase structure grammar |
| 5C. preacher | iii) coda |
| 5D. alveolar stop | iv) assimilation |
| 5E. 'S | v) juncture |
| 5F. settle | vi) schwa |
| 5G. left turn | vii) syllabic consonant |
| 5H. good boy | viii) elision |
| 5I. why choose | ix) weak form of <u>has</u> |
| 5J. said | x) trill |
| 5K. S→NP+VP | xi) consonant cluster |
| 5L. big | xii) <u>dumb</u> |

($\frac{1}{2} \times 12 = 6$ marks)

6. Transcribe the words into phonemic transcription (IPA) symbols:

- 6A. family
6B. ninth
6C. shocked
6D. profit
6E. road
6F. truth
6G. soft
6H. munch
6I. task
6J. chain

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



MANIPAL UNIVERSITY
FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – JUNE 2011
SUBJECT: INTRODUCTION TO HEARING AND HEARING SCIENCES (B 1.3)

(NEW REGULATION)

Friday, June 10, 2011

Time: 10.00-13.00 Hours

Max. Marks: 80

- 1A. Explain the need for dB scale.
1B. What is equal loudness contour? Describe its application.

(6+6 = 12 marks)

OR

- 1A. Discuss MAP and MAF.
1B. What is missing 6 dB and its explanation?

(8+4 = 12 marks)

- 2A. Describe the anatomy of tympanic membrane with a neat diagram.
2B. Write a note on travelling wave theory.

(8+4 = 12 marks)

OR

- 2A. Write a note on anatomy of external ear with a neat diagram.
2B. Describe the auditory and non auditory functions of external ear.

(6+6 = 12 marks)

- 3A. Discuss the need for puretone audiometry.
3B. Write a note on Ac and BC transducers.

OR

- 3A. Describe the procedure of objective calibration of head phones.
3B. Compare and contrast screening and diagnostic testing.

(8+4 = 12 marks)

- 4A. Discuss various types of noises used for masking.
4B. What is the need for extended high frequency audiometry?

OR

- 4A. Explain the criteria for masking AC, BC, SRT, SIS with example.
4B. Describe critical band concept.

(8+4 = 12 marks)

- 5A. Describe the principle, procedure and interpretation of any one positional test.
5B. Explain physiology of vestibular system.

OR

5A. Explain any two tuning fork test in detail.

5B. Discuss any two genetic causes of congenital hearing loss.

(8+4 = 12 marks)

6. Answer in two or three sentences:

- i) FIT test
- ii) SRT
- iii) Artificial ear
- iv) Pitch scales
- v) Ampule
- vi) Utricle
- vii) Shadow curve
- viii) Cross hearing
- ix) Lateralization
- x) Ambient noise

(2×10 = 20 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – JUNE 2011****SUBJECT: PSYCHOLOGY RELATED TO SPEECH AND HEARING (B.1.3.4)
(OLD REGULATION)**

Monday, June 13, 2011

Time: 10.00-13.00 Hours

Max. Marks: 80

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

1. What is normality? Critically discuss any two perspectives of normality.
 2. Define Clinical Psychology. Discuss any three methods used in clinical psychology.
 3. Discuss the various psychological assessment tools used in speech and hearing disorders.
 4. Define mental disorder. Describe any three models of mental disorders.
 5. Describe various stages of motor development from childhood to old age.
 6. What are cognitive functions? Discuss assessment of cognitive functions.
 7. Describe interpersonal relationship and its assessment.
 8. What are reinforcements? Describe different schedules of reinforcement with examples.
 9. Describe shaping, time-out, token economy and contingency management with the help of examples.
- 10. Short Notes: (Answer any TWO of the following)**
- 10A. ICD -10 classification.
 - 10B. Personality assessment.
 - 10C. Operant conditioning.



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MANIPAL UNIVERSITY
FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – JUNE 2011

SUBJECT: MANAGEMENT OF THE HEARING IMPAIRED (B 1.4)

(NEW REGULATION)

Monday, June 13, 2011

Time: 10.00-13.00 Hours

Max. Marks: 80

- 1A. Differentiate unisensory V/S multisensory approach.
1B. Auditory sensory stimulation is superior for rehabilitation of hearing impaired. Discuss.
(4+8 = 12 marks)

OR

- 1A. Discuss High Risk Register.
1B. Define Aural rehabilitation and discuss the goals of aural of aural rehabilitation.
(6+6 = 12 marks)

- 2A. Differentiate Natural V/S structured approach.
2B. Structured approach is superior over natural approach. Discuss.

OR

- 2A. Computer aided method in aural rehabilitation.
2B. Discuss in detail the Fitzgerald key method to teach language.
(4+8 = 12 marks)

- 3A. Classify educational placement options based on Lowe's method.
3B. Discuss the factors to be considered for the educational placement for hearing impaired.

OR

- 3A. Counselling for hearing impaired parents.
3B. Discuss Inclusive education in detail.
(4+8 = 12 marks)

- 4A. Differentiate ALD's V/S Hearing aids.
4B. Discuss any two group amplification devices.

OR

- 4A. Describe Modular hearing aids.
4B. Discuss FM system with its application.
(4+8 = 12 marks)

- 5A. Counselling for geriatric population.
5B. Discuss the trouble shooting of hearing aids in detail.

OR

- 5A. Write a note on EAC with ear mould.
- 5B. Discuss different types of ear moulds in detail.

(4+8 = 12 marks)

6. Explain in two or three sentences:

- i) Harness
- ii) District Rehabilitation centre
- iii) ADIP scheme
- iv) Reverse integration
- v) Prerequisites for integration
- vi) Critical distance in classroom
- vii) Non- formal education
- viii) Internal noise source in classroom
- ix) Follow up
- x) Ling sound test.

(2×10 = 20 marks)



MANIPAL UNIVERSITY**FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – JUNE 2011**

**SUBJECT: BASIC MEDICAL SCIENCES RELATED TO SPEECH AND HEARING (B 1.5)
(NEW REGULATION)**

Wednesday, June 15, 2011

Time: 10.00-13.00 Hours

Max. Marks: 80

✍ Answer Section A, Section B and Section C in separate answer books.

SECTION – 'A' : ANATOMY : 20 MARKS

1. Name the parts of the respiratory system. Write a note on pharynx. (4+4 = 8 marks)

2. Write short notes on:

2A. Cerebellum

2B. Synovial joints

2C. Tympanic membrane

(4×3 = 12 marks)

SECTION – 'B' : PHYSIOLOGY: 20 MARKS

3. Answer the following questions:

3A. Mention the hormones of anterior pituitary. List their functions.

3B. Draw a labeled diagram of the stretch reflex. Explain the same.

(5×2 = 10 marks)

4. Answer the following questions:

4A. Define facilitated diffusion. Give an example.

4B. List any two differences between skeletal muscle and smooth muscle.

4C. List any two functions of liver.

4D. Mention any two functions of estrogen.

4E. Define tidal volume. Give its normal value.

(2×5 = 10 marks)

SECTION – 'C' : ENT : 40 MARKS

5. Discuss the congenital disorders of the larynx with respect to their etiopathogenesis, clinical features and management.

OR

Discuss in detail with suitable diagrams the Anatomy of larynx.

(10 marks)

6. Write short notes on any SIX:

6A. Peritonsillar abscess.

6B. Tubercular laryngitis.

6C. Chronic tonsillitis.

6D. Ulcers of oral cavity.

6E. Noise induced hearing loss.

6F. Bell's palsy.

6G. Otitis media.

(5×6 = 30 marks)



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MANIPAL UNIVERSITY

FIRST YEAR B.A.S.L.P. DEGREE EXAMINATION – JUNE 2011

**SUBJECT: PSYCHOLOGY RELATED TO SPEECH AND HEARING (B 1.6)
(NEW REGULATION)**

Friday, June 17, 2011

Time: 10.00-13.00 Hours

Max. Marks: 80

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

1. What is Psychology? Explain different branches of Psychology.
2. What is learning? Explain Operant conditioning in detail.
3. Narrate emotional development across life stages.
4. Explain cognitive development with the help of Piaget's model.
5. Explain personality development with the help of Freud's psychosexual stages.
6. Define clinical psychology. Discuss psychodynamic and humanistic perspectives of clinical psychology.
7. Briefly discuss various models of mental disorders with examples.
8. Define personality. Briefly discuss various projective tests.
9. What is counseling? Discuss any two approaches of counseling in detail.
- 10. Short notes: (answer any TWO of the following)**
 - 10A. Schedules of reinforcement.
 - 10B. Intelligence tests.
 - 10C. Application of learning in speech and hearing.

