

# All India Institute of Medical Sciences, Jodhpur

# Indicative Syllabus for the Post of Audiometric Technician (ENT)

(Syllabus is only indicative. The questions can assess any aspect of knowledge, aptitude, attitude and practical skills, which is expected from a trained person to work efficiently at the advertised post)

# Section A

40% Questions covering the following topics:-

General Intelligence & Reasoning: It would include questions of non-verbal type. The test will include questions on similarities and differences, space visualization, problem solving, analysis, judgment, decision making, visual memory, discriminating observation, relationship concepts, figure classification, arithmetical number series, non-verbal series etc. The test will also include questions designed to test the candidate's abilities to deal with abstract ideas and symbols and their relationship, arithmetical computation and other analytical functions.

**Quantitative Aptitude**: This paper will include questions on problems relating to Number Systems, Computation of Whole Numbers, Decimals and Fractions and relationship between Numbers, Fundamental arithmetical operations, Percentages, Ratio and Proportion, Averages, Interest, Profit and Loss, Discount, use of Tables and Graphs, Mensuration, Time and Distance, Ratio and Time, Time and Work, etc.

**Computer Knowledge**: Candidates' understanding of the Basics of Computer Knowledge, its parts, functions, emails, MS office, etc.

# Section B (SUBJECT KNOWLEDGE)

60% Questions to be based on the subject specific to the post with following topics:-

- 1. Communication Sciences Speech & Language
  - a. Basic Concepts in Speech, Language and Communication
  - b. Pre-requisites and Normal Developmental Aspects of Speech, Language, Voice, Fluency and Prosody
  - Basic Concepts Related to Incidence and causative factors for Speech-Language, Feeding and Swallowing Disorders including Classification and Characteristics
- 2. Basic Concepts Related to Incidence and causative factors for Feeding and Swallowing Disorders including Classification and Characteristics
- 3. Communication Sciences Audiology
  - a. Historical Aspects
  - b. Concept of dB and Threshold Measurements
  - c. Properties of Sound
  - d. Causes of hearing loss
- 4. Anatomy, Physiology and Pathology related to Speech Language & Hearing
  - a. Speech Systems
  - b. Auditory Systems
  - c. Central Nervous System
  - d. General Pathology
- 5. Clinical Psychology
  - a. Basic Concepts
  - b. Clinical Methods
  - c. Developmental Psychology
  - d. Learning Behavior Modification and Counselling
- 6. Electronics and Acoustics
  - a. Introduction to Electronics & Signal Processing



- b. Fundamentals of Acoustics
- c. Introduction to Information Technology
- d. Instrumentation in Speech, Language and Hearing
- 7. Clinicals Aspects in Audiology and Speech-Language Pathology
- 8. Indian Constitution and Human Rights
- 9. Basics in Computer Applications
- 10. Speech-Language Pathology Assessment & Management
  - a. Basic Concepts of Intervention and Procedures involved in Speech-Language Diagnostics and Therapy
  - b. Diagnostic Models and Approaches
  - c. Execution of Speech-Language Therapy, Documentation and Professional Codes
- 11. Audiological Evaluation
  - a. Pure Tone Audiometry, Speech Audiometry, Clinical Masking, Calibration
- 12. Linguistics & Phonetics
  - a. Language and Linguistics
  - b. Morphology, Syntax, Semantics and Pragmatics
  - c. Phonetics and Phonology
  - d. Language Acquisition and Language Learning
- 13. Otolaryngology
  - a. External, Middle and Inner Ears Development, Clinical Anatomy, Physiology and their Disorders
  - b. Oral cavity, Pharynx, Esophagus Development, Clinical Anatomy, Physiology and their Disorders
  - c. Larynx Development, Clinical Anatomy, Physiology and its Disorders
- 14. Pediatrics & Genetics/Sign Language/Community Based Rehabilitation
  - a. Basic concepts and terminologies in Genetics
  - b. Genetic assessment
  - c. Genetics in Communication Disorders
  - d. Basic concepts in Pediatrics Growth & Development, Nutritional Disorders, Early identification of perinatal and other pediatric disorders
  - e. Understanding deafness and Manual option (Sign Language) in Indian Scenario
  - f. Evaluation and Guidance of Manual Form (Sign Language) of Communication in India
  - g. Indian Sign Language (ISL) in Daily Communication and Skill Development Challenges
  - h. Methods of Teaching ISL and Factors affecting ISL
  - Introduction to Community Based Rehabilitation (CBR), Preparing Community and Persons with Disability for CBR
  - j. Role of Media in Enhancing Community Participation
- 15. Speech and Drama/Clinical Counselling
  - a. Field of Speech, Basics of Drama, and 'Speech' in Drama
  - b. Basics of Clinical Counselling including Stages, Principals, Tools, and Applications
  - c. Professional Counselling
- 16. Indian Languages
- 17. Voice and its Disorders
  - a. Voice Production and Correlates of Voice
  - b. Assessment of Voice
  - c. Voice Disorders and Its Classification Systems
  - d. Management of Voice Disorders
- 18. Speech Sound Disorders
  - a. Basic Concepts of Phonology and Distinctive Features and Acoustic Features
  - b. Assessment and Management of Speech Sound Disorders
- 19. Diagnostic Audiology Behavioral Tests, Physiological Tests
  - a. Overview of Behavioral and Physiological Diagnostic Tests
  - b. Cochlear, Retrocochlear Pathology and Pseudohypacusis
  - c. Immittance Evaluation
  - d. Auditory Brainstem Response and other Auditory Evoked Potentials
  - e. Middle and Long Latency Auditory Evoked Potentials
  - f. Otoacoustic Emissions and Tests of Vestibular Functioning
  - g. Central Auditory Processing Disorders
  - h. Vestibular and Tinnitus Assessment



### 20. Educational Audiology

- a. Importance of Early Identification and Different Approaches for Communication
- b. Methods of Teaching Language for Children with Hearing Impairment
- c. Educational Placement
- d. Educational Problems, Laws and Policies for Educating and Counselling Parents

#### 21. Neurology

- a. Essential Neurological Concepts and Relationship between Neurosciences and Speech-Language and Hearing
- b. Gross Anatomy and Blood Supply to the Brain
- c. Common Causes of Neurological Conditions and Neurological Assessment
- d. Common Neurological Conditions Leading to Speech-Language and Hearing Disorders Sings, Symptoms and Behavioral Characteristics

## 22. Fluency and its Disorders

- a. Fluency and Stuttering
- b. Theories, Assessment and Management of Stuttering
- c. Other Fluency Disorders

### 23. Child Language Disorders

- a. Overview of Theories of Language Acquisition and Neurological Correlates of Language Development in Children
- b. Language Characteristics (Oral and Written) of Developmental and Acquired Language Disorders in Children
- c. Management of Children with Language Disorders

# 24. Rehabilitative Audiology

- a. Auditory Learning
- b. Speech Reading
- c. Management of Tinnitus and Hyperacusis
- d. Management of Children with Special Needs and Rehabilitation of Older Adults with Hearing Impairment

#### 25. Research Methods & Statistics, Epidemiology

- a. Basics
- b. Research Design in Audiology and Speech-Language Pathology
- c. Statistics and Data Collection

#### 26. Motor Speech Disorders in Children

- a. Neuromotor Organization and Sensorimotor Control of Speech and Motor Speech Disorders
- b. Nature, Assessment and Management of Motor Speech Disorders in Children

#### 27. Structural Anomalies and Speech Disorders

- a. Cleft Lip and Palate and Associated Problems including their Assessment and Management
- b. Velopharyngeal Dysfunction and Assessment
- c. Types of Oral and Laryngeal Cancer and Management
- d. Anomalies of Tongue and Mandible

#### 28. Amplification Devices

- a. Basics and Classification
- b. Signal Processing in Hearing Aids
- c. Compression in Hearing Aids and other Signal Processing
- d. Electroacoustic Measurement of Hearing Aids

#### 29. Pediatric Audiology

- a. Development of Human Auditory System
- b. Early Identification of Hearing Loss and Hearing Screening
- c. Diagnostic Evaluations Behavioral and Objective Tests
- 30. Public Speaking/Counselling/Performing Arts

#### 31. Motor Speech Disorders in Adults

- a. Introduction to Motor Speech Disorders in Adults
- b. Etiologies, Assessment and Management of Dysarthria and Apraxia of Speech

#### 32. Language Speech Disorders in Adults

- a. Neurosciences of Adult Language Disorder and Aphasiology
- b. Non-Aphasic Language Disorders/Cognitive-Communication Disorders in Adults



- c. Assessment of Aphasia and Other Cognitive-Communication Disorders
- d. Intervention Strategies for aphasia and Cognitive-Communication Disorders
- 33. Environmental Audiology and Ecosystems
  - a. Natural resources Renewable/Non-renewable, Biodiversity, Conservation
  - b. Environmental Pollution, Environmental Policies and Practices
  - c. Human Communities and the Environment and Field Work
  - d. Environmental Noise Overview, Types and Effects
  - e. Audiological Evaluation of Individuals Exposed to Occupational Noise
  - f. Noise and Vibration Measurements
  - g. Hearing Conservation
- 34. Implantable Hearing Devices and Hearing Aid Fitting
  - a. Hearing Aid Selection and Fitting
  - b. Hearing Aid Fitting in Different Population, Assistive Listening Devices and Outcome Measures
  - c. Implantable Hearing Devices
  - d. Mechano-Acoustic Couplers and its various modifications, Counselling and Troubleshooting
- 35. Speech-Language Pathology and Audiology in Practice
  - a. Introduction to Speech-Language Pathology and Audiology in Practice
  - b. Public Laws Related to Disability
  - c. Organization and Administration of Speech-Language and Hearing Centers and Public Education
  - d. Scope and Practice of Tele-Assessment and Tele-Rehabilitation

## 36. Bi/multilingualism

- a. Introduction to the language families of the world and India
- b. Issues related to second language acquisition & factors influencing it
- c. Inter-language theory, language transfer and linguistic interference
- d. Differences between first and second language acquisition/learning Bilingualism/Multilingualism
- e. Metaphonology
- f. Writing systems types of writing
- g. History of writing systems
- h. Indian writing systems

