

SYLLABUS OF MASLP – 2006-07

Part I examination

The course of Part I shall be of the instruction of one academic year. The examination for Part I shall consist of six papers as under, each of three hours during with maximum of 80 marks. In addition 20 marks in each paper will be reserved for internal assessment.

Part I examination

Paper	Subject	Lect	Credit Pract/ Clinic	Duration Of Paper	Maximum Marks		
					Exami- nation	Internal Assess- ment	Total
I	Advanced Course in Speech Sciences	3	--	3	80	20	100
II	Physical & Biological bases of hearing	3	--	3	80	20	100
III	Instrumentation and Computer science	3	2	3	80	20	100
IV	A Medical science I	2	2	2	40	10	50
	B Medical science II			2	40	10	50
V	Statistics and Research Method	3	--	3	80	20	100
VI	Clinical Psychology	3	--	3	80	20	100
Total							600

Practical Clinical Work

- a) Audiology - 2
- b) Speech Pathology - 2

Note :- 1) Practical and Clinical Work Carry no marks in the First Year .
2) One credit hour in theory means One Clock hour of lecture per week.
One credit hour in practical / clinical work means two clock hours of practical / clinical work per week.

Part II examination :-

The course for Part II shall be of the duration of one academic year and its examination will be held at the end of the two academic year.

A candidate admitted to Part II course shall register for Part II examination on one of the following Branches:

- Branch I : Audiology
- Branch II : Speech Pathology.

The examination for Part II in each of the Branch shall consist of written examination, practicals and dissertation.

Part II examination :**Branch I : Audiology**

Paper	Subject	Credits	Duration of Paper (Hours)	Maximum Marks		
				Examination	Internal Assessments	Total
I	Advanced Courses in Hearing Sciences	3	3	80	20	100
II	Advanced in Diagnostics Audiology	3	3	80	20	100
III	Advances in Rehabilitative Audiology	3	3	80	20	100
IV	Seminars in Preventive & Forensic Audiology	3	3	80	20	100
V	Psychology of Exceptional Children	3	3	80	20	100
VI	Clinical Practicum in Audiology	10	Viva	50	50	100
Dissertation (Accepted / Rejected)						
Branch II : Speech Pathology						
I	Psychoneur olinguistics	3	3	80	20	100
II	Advanced Courses in Areticulatory Disorders (Neurogenid &Non Neurogenic)	3	3	80	20	100
III	Advanced Courses in Language Disoders	3	3	80	20	100
IV	Seminar in Disorders of Phonation and Fluancy	3	3	80	20	100
V	Psychology of Exceptional Children	3	3	80	20	100
VI	Clinical Practicum	10	Viva Vice	50	50	100
Dissertation (Accepted / Rejected)						

Note : One credit hour in theory means one Clock hour of Lecture per week.
One clock hour in practical / dissertation means two clock hours of work per week.

Following are the syllabus for the papers prescribed for part I examination:-

Paper I :- Advanced courses in Speech Sciences.

1. Review of anatomy and physiology of organ. Theories and models of Speech production.
2. Review of normal acquisition of Speech analysis of infant cry, vocalization and babbling - Measurement, interpretation, diagnostic and therapeutic significance.
3. Oral sensory perception and its relevance to speech.
4. Perceptual analysis of Speech.
5. Aerodynamic and acoustic analysis of speech including parameters of voice and speaker identification.
6. Speech synthesis: Technique
7. Computer application: Programmed instruction techniques.
Communication aids – its relevance to Speech synthesis.

Paper II : Physical and Biological Bases of Hearing.

1. Brief review of anatomy and physiology of the auditory system.
2. Anatomy and Electrophysiology of the inner ear, Cells Cochlear fluids, Cochlear potentials. Tonotopic organization. Theories of hearing, Coding of the complex sounds.
3. Neuro-anatomical and Physiological aspects, Action potential – Single nerve and compound. Tuning curves.
4. Efferent auditory pathways, Anatomy and Physiology, centrifugal system.
5. Vestibular System.

Paper III : Instrumentation and Computer Science.

1. Role of electronics in Speech and Hearing
2. Transducers, Meters, recording devices, preamplifiers, amplifiers etc. Impedance matching Power system.
3. Instrumentation in Speech and Hearing, Description, Standards and application, Installation, Calibration, Maintenance, minor repairs and trouble shooting.
4. Building acoustics. Anechoic chambers.
5. Sound recording and reproduction. Equipment and techniques.
6. Instrumentation in noise and vibration measurements.
7. Ultrasonic and Infrasonics properties and application in the field of Speech and Hearing.
8. Computers – basic principles and its application in speech and Hearing field, Introduction to programming languages. Application software.

Paper IV: A: Medical Sciences I (E.N.T.)

1. Methods of examination of ENT patient
2. Ear - Embryologic development, review of anatomy and physiology. Affections of the external ear, congenital conditions of middle ear clefts. Etiology, Pathology, Clinical features, Investigations course and complication, (if any), differential diagnosis and treatment / management of :
 - i)Otitis media, Supportive and non Supprative
 - ii)Facial paralysis with special reference to Bell's Palsy
 - iii)Otosclerosis

Sensori neural deafness, Causes, Clinical features, investigations, differential diagnosis and treatment / management. Miniere's disease Acoustics neuroma. S.N.Deafness of sudden onset including perilymph fistulas and presbycusis.

ENT in aviation

Acoustic traumas, Ototoxicity, noise- induced hearing loss. Tinnitus, Cochlear implant.

3. Larynx and Trachea :-

Review of anatomy and physiology of larynx. Methods of examination of larynx. Acute and chronic laryngitis with special reference to singers nodules laryngeal palsics benign and malignant tumor of larynx, Tracheotomy Surgical tehnique in vocal rehabilitation after total laryngectomy.

4. Mouth and pharynx

5. Embryonic development, methods of examination.

Acute and chronic tonsillopharyngitis. Patatal and pharyngeal palsles. Cleft palates and velopharyngeal insufficiencies. Submucous fibrosis of soft palate and check.

6. Nose (in brief)

Anatomy and Physiology, Respiratory physiology. Methods of examination, Acute and chronic maxillary sinusitis. Nasal allergy, Epistaxis. Benign and malignant tumours of nose and paranasal sinuses. Rhinoscleromas.

Operations:

Ear: Myringotomy, grommets, Myringoplasty, Tympanoplasty, mastoid surgery stapedectomy, Tympanic neurectomy.

Others: Pharyngoplasty, Cleft palate repair, tongue tie release, microlaryngoscopy, laryngectomy.

Note: 1) Students should attend ENT, OPD and O.T.

2) Get conversant with examination of ENT patient and various OPD procedures, and conditions related to Audiology and speech.

3) At the end of clinical term there will be test and marks of this test will be counted toward Internal Assessment.

Paper IV :- B. Medical Science II (Neurology)

This syllabus is suggested with a view to provide relevant information to the student of M.Sc. in Audiology and Speech Therapy on the anatomical and physiological aspects of nervous system and the diseases of nervous system which affect the language, speech and Hearing, lectures should be supplemented with adequate library assignments in order to add maximum information on the current trends in the field of language speech pathology and neurology / neurological conditions.

1. Review of the embryological, anatomic – physiological aspects of the Central and peripheral nervous system. Emphasis on cerebral hemispheres, subcortical system, pyramidal and extrapyramidal system and cranial nerves.
2. Brief description of signs symptoms and treatment of diseases of peripheral nervous system (Motor, sensory and autonomic aspects).

3. Diseases, signs, symptoms and treatment of cranial nerves (Brief review of congenital, traumatic, inflammatory, vascular, degenerative and SOL conditions Which have direct bearing on language, Speech and hearing functions.)
4. Space occupying Lesions of the CNS vascular and epileptogenic disorders of CNS.
5. Acute infections and syphilis of CNS. Meningitis, Poliomyelitis, Encephalitis, (different types) and Herpes, Table Borsalis, GP I, Congenital neurosyphilis, Asymptomatic Aids and its effects.
6. Parkinson's disease, Chorea, Athetosis, Ataxias, Multiple sclerosis and muscular atrophies, Myasthenia gravis, Polyneuritis.
7. Some common neurological affection of infancy and childhood, OP Spinal birth palsics hydrocephalus, hemiplegias, etc.
8. Diseases due to toxic effects of the drugs, chemicals (industrial hazards) and other pollutants.
9. Differential diagnosis – Organic Vs. Psychological conditions
10. General principles of neurological diagnosis – anatomical and non-anatomical.

Scheme of examination of the nervous system.

EEG – its importance in diagnosis.

CT Scan and MRI in neurological diagnosis.

(Above topics should be taken with proper demonstration and emphasis on its interpretations)

Students should get the benefit of bedside clinic demonstrations for common conditions so that proper examination and diagnostic procedure could be well demonstrated and discussed.

An examination at the end of the lectures may be included and the marks obtained by the candidate be counted towards internal assessment, System of internal examination may be decided by the respective lecturers in consultation with the institutions concerned.

Paper V:- Statistics and Research Methods

1. Research methods in behavioral sciences with special reference to speech and hearing. (The teacher should discuss a few selected research studies in the area of speech and hearing, in regard to the appropriateness of various techniques used and suggest possible modifications).
2. Identification, formulation and statement of problem, review of literature, objectives, hypothesis, constructs and variables, operational definition of concepts.
3. Research designs, case studies, experiments, laboratory research, ex-post-facto studies, field studies, fundamental and applied research, Type of experimental designs- completely randomised, latin square, factorial, randomised blocks, Matching of samples experimental and control groups, self control group. Types of survey designs- exploratory, explanatory, longitudinal and cross sectional.
4. Sampling designs under each types of research design, determination of sample size, standard error of mean, standard error of proportion.
5. Methods of data collection: Observation, interview, questionnaires, structured tool, Preceded tool, pre-testing of tools.
6. Processing of data: Coding/card design, introduction to computers, use of one statistical software – NOSS and SPSS.
7. Statistical analysis (descriptive) : Application of measures of central tendencies and variability, correlation of co-efficient, of association (Phi), Yule's Q, contingency coefficient C, tetrachoric correlation, point biserial, gamma coefficient, co-efficient of concordance multiple and partial correlation, the concept of explained variance.

8. Statistical analysis (Inferential) testing of hypothesis, t-test for single mean, t-test for independent samples, t-test for related samples, f-test, z-test for proportion, chi square test, testing of significance of correlations.
9. Analysis of variance – one way, two way, and higher order, analysis of variance for repeated measures on subjects, analysis of covariance.
10. Understanding and interpretation of following techniques that multiple regression, factor analysis, discriminant analysis, cluster analysis.
11. Parametric and non parametric statistics as applicable to single case studies and small sample studies.
12. Construction of tests and scales - Thurston's paired comparison, method of equal appearing interval, rating scales (Likert's). Validity of scales-face validity, content validity, external validity, intrinsic validity. Reliability of scales time reliability spatial reliability, internal consistency reliability split half method, item analysis, scalogram analysis, standardization of test scores.
13. Interpretation of statistical results writing of research report and citation of references.

Paper VI: - Clinical psychology

1. Review of studies in clinical psychology and advances in psycho-diagnostics.
2. Nature of personality – definitions – theories briefly (psychoanalytic, behavioristic, humanistic, inter-personal) effects of hearing handicapped on personality development assessment of personality-types of tests and their limitations.
3. Classification and problem in classification of major behaviour problems.
4. Psychoneuroses- definition, clinical picture, intervention etiology, phobias, anxiety neurosis, conversion reactions, dissociative reactions, obsessive-compulsive neurosis, neurasthenia, hypochondriasis etc.
5. Psychoses – definition, clinical picture, aetiology, intervention, schizophrenia, mania-depressive, psychosis, paranoia, involuntional melancholia, etc.
6. Nature and meaning of Psychotherapy- definition- characteristics of psychotherapy-background and training of psychotherapy, ethical principals in the practice of psychotherapy- psychoanalysis-non-directive psychotherapy- psychological psychobiological (Distributive analysis and synthesis) Gestalt therapy - behaviour therapy- Rational emotive therapy indications and contra-indications limitations.
7. Special psychotherapies – Hypnotherapy – play therapy – Group therapy – Family therapy – psychodrama.
8. Behaviour therapy/ behaviour-modification-historical perspective Pavlov - Thorndike-Watson- principles of classical conditioning difference between classical and operant conditioning- Skinner's contribution- social learning theories – Bandura's contribution - systematic desensitisation of Wolpe-principles of successive approximation - Shaping, promoting, response, cost, differential reinforcement, modelling, behavioral rehearsal, cognitive behaviour therapy.
9. Counselling : Introduction- definition- types of counselling- directive, non directive and the eclectic-individual, group, family, parent counselling, behavioural counselling- vocational counselling- educational counselling, genetic counselling, rehabilitative counselling.
10. Vocational guidance- definition and nature- assessment of general mental ability, Special abilities, interests and other factors and utilisation of test results for vocational guidance.
11. Vocational rehabilitation facilities - V.R.C.s, Special employment exchanges occupational opportunities, the concept of sheltered workshops - need for follow-up with clients.

Standard for passing Examination:

- ◆ No class shall be awarded in the Part I examination. Class will be awarded on the basis of aggregate marks obtained by a candidate in Part I and Part II examinations.
- ◆ To pass the Part I examination a candidate must obtain 40% of the full marks including internal assessment in each paper and 50 % of the aggregate marks.
- ◆ A candidate who has not passed the Part I examination in accordance with the provisions above may, at his/her option, be exempted from appearing in the subject(s), in which he/she has scored not less than 50% of the maximum marks in the subject(s) and will be declared to have passed the whole examination when he/she has passed in the other subject(s) of the examination in accordance with the provisions above.
- ◆ Candidates passing the examination in this manner will not be eligible for the award of classes, scholarships or prizes.
- ◆ Following are the syllabi for the papers prescribed for part II examination in each of the two branches.

PART II Examination

Branch I: Audiology

Paper -I : Advanced course in Hearing Sciences

1. Auditory stimuli, Types and characteristics and filters, couplers, etc. Calibration
2. Psychoacoustics, Classical and modern psychophysical techniques of measurement.
3. Detailed study of normal and abnormal psychoacoustical phenomena: Absolute thresholds, differential thresholds for intensity and frequency, masking, perceptions of loudness and pitch. Adaptation and fatigue. Theories and models. Binaural hearing localization and lateralisation. MLD, Theories and models.

Paper II : Advances in diagnostic Audiology

In depth critical review and study of existing tests and test batteries for :

1. Site of lesion tests
2. Difficult – to – test cases
3. Screening
4. Others e.g. Learning disabilities and perceptual disorders.
Evaluation in terms of reliability, validity, sensitivity and specificity having audiological implications.
Report writing.

Paper III : Advances in Rehabilitative Audiology

Assessment procedures with reference to rehabilitative aspects.

Auditory training, Speech reading and Speech and Language training.

Conservation of Speech. Educational Audiology.

Selection of amplification devices, theories underlying and validation procedures.

Assistive Listening Devices and alarm devices.

Cochlear implant and candidacy, Pre and post - audiological findings.

Design and acoustics of classrooms/ schools for the hearing impaired.

Management of auditory perceptual disorders.

Paper IV : Seminars in Preventive and Forensic Audiology

Preventive Audiology.

Primary, Secondary and tertiary Prevention of hearing loss.

Hereditary, Congenital and acquired. Early identification procedures for different populations, School and industrial hearing. Conservation programmes. Cost benefit analysis

Forensic Audiology

Diagnosis of functional hearing loss. Compensation for noise induced hearing loss – effect of presbycusis. Legal aspects of audiology.

Report- writing.

Paper V : Psychology of Exceptional Children

(Common to Branches I and II)

1. Introduction to the concept of exceptionality - Historical developments in the identification and therapeutic management of the exceptional criteria for identification and differential diagnosis - the various types of exceptionality.
2. The intellectually exceptional. Etiology – classification – borderline intelligence, mild, moderate, severe and profound retardation – characteristics, attainments and limitations - implications for rehabilitation - The intellectually gifted- characteristics - identification and educational implications. Measurement of intelligence - types of tests - special modifications - limitations of testing.
3. Learning disabilities – Etiology - criteria for diagnosis of LD - Specific developmental disorders - (except early infantile autism) - interventions.
4. Sensory exceptionality:
 - a) Visual impairment - causes, types and implications of visual impairment-teaching the visually impaired, special adoption and aids - psychological assessment- vocational training and placement
 - b) Hearing impairment - psychological assessment and adoption of tools and tests - vocational training and placement.
5. Locomotor handicaps – definition - classification and psychosocial implications, causes – characterization - cerebral palsy, muscular dystrophy, paralysis, amputation and others - psychological assessment remediation including aids and appliances - educational programmes.
6. Emotional exceptionality – classification – definition - etiology - clinical picture - assessment and management – attention deficit disorders - conduct disorders - anxiety disorders – reactive disorders – early infantile autism - schizoid disorders – oppositional disorders - identify disorders - eating disorders –stuttering – elective mutism.
7. The Child with multiple handicaps – classification – characterization - problems in assessment - remedial programs - prognosis.
8. Rehabilitation services – definitions - historical perspective - patterns of rehabilitation services for children - the role of parents - voluntary organizations - Governmental effort - legislation.

Paper VI : Clinical Practicum in Audiology

Branch II : Speech Pathology

Paper I : Psychoneurolinguistics

1. Relevance to the field of speech/ Language Pathology.
2. Review of nature and function of language – phonology, Morphology, Syntax, Semantics and pragmatics.
3. Transformational Generative, Grammer model of language, Components of T.G. Grammer and their psychological reality.
4. Semantics - meaning and reference. Theories of meaning with special reference to generative semantics
5. Psycholinguistics and language acquisition: Issues involved in language acquisition. Models of language acquisition, Motherese. Pragmatics of language acquisition. Second language acquisition. Language acquisition in bi-and multi lingual environment.
6. Language and thought. Their relationship and dependency in language acquisition.
7. Neurolinguistic basis and language: Language and the brain localisation. Left and right hemispheres functions, coding and decoding.
Neuroanatomical basis of language: Neurophysiology of language learning and dysfunctions. Linguistic and Psycho-neurolinguistic models of language pathology.

Paper II : Advanced Course in Articulatory Disorders

1. A review of Progressive change in approaches to diagnosis, classification and therapy. Comparative study.
2. Clinical profiles of articulation disorders. Perceptual, instrumental and linguistic findings. Techniques and approaches to differential diagnosis and therapy. Comparative views.
3. Perceptual acoustic and aerodynamics of speech in peripheral and central dysarthrias and their relationships. Problems in measurement and clinical findings. Management .
4. Augmentative and alternative communication systems/approaches. Various appliances - evaluation, fitting and training. Relevance to natural speech communication and acceptance of aids.
5. Types of research designs commonly applied in this field of study. Their merits and demerits.

Paper III : Advanced Course in Language Disorders

1. Brief review of neurobiology of language including developmental. Attention on cortical and sub cortical structures.
2. Childhood language disorders. Analysis, differential diagnosis and therapeutic management.
3. Neuropsycholinguistic approach to physiology : Process and models.
4. Acquired language disorders : Aphasia/Dysphasia, senile dementia, Alzheimer's syndromes, Schizophasia, dyslexia, due to old age, Approaches to evaluation, diagnosis, differential diagnosis and therapeutics.
5. Augmentative and alternative communication systems/ approaches.
6. Speech and language profiles of children with delayed Speech language development perceptual, instrumental and linguistic. Findings, techniques and approaches to differential diagnosis and therapy. Comparative views.
7. Types of research designs commonly applied in this field of study. Their merits and demerits.

Paper IV : Seminar in disorders of Phonation and Fluency

1. A review of progressive change in approaches to diagnosis, classification and therapy. Comparative Study.
2. Review, evaluation and synthesis of information regarding theories of etiology, symptomatology and therapy approaches.
 - a. Clinical Profiles of Voice disorders: Perceptual and Instrumental findings. Techniques and approaches to differential diagnosis and therapy comparative views.
 - b. Clinical profiles of fluency disorders: Perceptual, instrumental and linguistics findings. Techniques and approaches to differential diagnosis and therapy. Comparative views.
3. Type of research designs commonly applied in this field of study, their merits and demerits.

Paper V: Psychology of Exceptional Children, syllabus same as that of paper V of Branch I.

Paper VI: Clinical practicum in Speech Pathology, Viva Vice, Defending of dissertation

Practical and Clinical Work

- a) Audiology - 2
- b) Speech Pathology - 2

Note: 1) Practical and Clinical work carry no marks in the First year.
2) One credit hour in theory means one clock hour or two lectures per week.

One credit hour in practical/clinical work means two clock hours of practical/clinical work per week.

FINAL EXAMINATION

The course for Part II shall be of the duration of one academic year and its examination will be held at the end of the two academic years.

A candidate admitted to Part II course shall register for Part II examination in one of the following Branches:

Branch I : Audiology

Branch II : Speech Pathology.

The examination for Part II in each of the Branches shall consist of written examination, practicals and dissertation.

Question Paper Pattern For F.Y. & S.Y. MASLP

Duration: 3 hrs.

Total Marks: 80

Question No. 6 is compulsory. Answer any 4 questions from the remaining.

(15 x 4 = 60)

Q. 1

Q. 2

Q. 3

Q. 4

Q. 5

Q. 6 Answer any Four

(5 x 4 = 20)

a.

b.

c.

d.

e.

f.