त्रिभुवन विश्वविद्यालय
सेवा आयोग

प्राविधिक सेवा, स्वास्थ्य समूह, अधिकृत तृतीय श्रेणी, प्राविधिक अधिकृत (स्पिच प्याथोलोजी) पदको खुला प्रतियोगितात्मक लिखित परीक्षाको पाठ्यक्रम
२०८१

लिखित परीक्षा योजना

लिखित परीक्षा : **कुल पूर्णाङ्क :** २००

पत्र/विषय	पूर्णाङ्क	उत्तीर्णाङ्क	परीक्षा प्रणाली	प्रश्न संख्या × अङ्क	समय
प्रथम	१००	४०	वस्तुगत - बहुवैकल्पिक प्रश्न (MCQs)	१०० प्रश्न × १ अङ्क	१ घण्टा ३० मिनेट
द्वितीय	१००	४०	विषयगत प्रश्न	८ प्रश्न × १० अङ्क ४ प्रश्न × ५ अङ्क	३ घण्टा

द्रष्टव्य :

१. लिखित परीक्षाका लागि १००/१०० पूर्णाङ्कका दुई पत्रहरु हुनेछन् ।
२. प्रथमपत्र र द्वितीय पत्रको लिखित परीक्षा पाठ्यक्रमको विषयवस्तु एउटै हुनेछ ।
३. प्रथमपत्र र द्वितीय पत्रको लिखित परीक्षा छुट्टाछुट्टै हुनेछ ।
४. वस्तुगत बहुवैकल्पिक (Multiple Choice) प्रश्नको विकल्प छनौट गर्दा गलत विकल्प छानेमा ऋणात्मक मूल्याङ्कन (Negative Marking) गरिने छ । अर्थात् यसरी मूल्याङ्कन गर्दा प्रत्येक गलत उत्तरको लागि २० प्रतिशत अङ्ककट्टा गरिनेछ । बहुबैकल्पिक प्रश्नको २० प्रतिशत अङ्क प्राप्ताङ्कबाट घटाइने छ । (उदाहरणका लागि परीक्षार्थीले २० अङ्कको बहुबैकल्पिक प्रश्नमा १५ प्रश्नको सही उत्तर र ५ प्रश्नको गलत उत्तर दिएमा निजको प्राप्ताङ्क (०.२० × ५=१.००) अर्थात् १५–१= १४ अङ्क हुनेछ । तर उत्तर नदिएमा त्यस बापत अङ्क दिइने छैन र अङ्क कट्टा पनि गरिने छैन ।
५. विषयगत प्रश्नको हकमा एउटै प्रश्नका दुई वा दुई भन्दा बढी भाग (Two or more parts of a single question) वा एउटा प्रश्न अन्तर्गत दुई वा बढी टिप्पणीहरू (Short notes) सोध्न सकिने छ ।
६. विषयगत प्रश्नमा प्रत्येक खण्डका लागि छुट्टाछुट्टै उत्तरपुस्तिकाहरू हुनेछन् । उम्मेदवारले प्रत्येक खण्डका प्रश्नको उत्तर सोही खण्डका उत्तरपुस्तिकामा लेख्नुपर्नेछ ।
७. प्रत्येक पत्रको उत्तीर्णाङ्क पूर्णाङ्कको ४० प्रतिशत हुनेछ ।
८. भाषा विषयबाहेक अन्य विषयका लागि उत्तरको माध्यम अंग्रेजी वा नेपाली हुनेछ ।

Section (A) : 50 Marks

1. **Audiology**

1.1 Acoustics of sound, sound measurements, dB concept and binaural hearing; psychoacoustic principles, methods and applications; tuning fork test; hearing loss -causes, types, classification, degree, pattern of hearing loss; neo-natal screening, need of early identification; development of auditory system, auditory behaviors at different age; high risk register; genetics and associated syndromes related to hearing and balance

1.2 Audiological test battery (behavioral and physiologic): administering and interpreting - pure-tone air and bone conduction testing; play audiometry; speech audiometry; immitance audiometry; electrophysiological test; vestibular test; site of lesion test; tests for functional hearing loss, types of audiograms

1.3 Concept of masking; criteria for masking during AC and BC testing, factors affecting hearing evaluation; masking dilemma, formal and informal testing; use of different stimuli in hearing test;

1.4 Hearing aids, implantable devices and assistive devices - classification/types; electro-acoustic measurement, selection/candidacy, programming, ear-mold

1.5 Disorders of auditory system - outer ear/ middle ear /inner ear disorders; pseudohypoacusis, ANSD, CAPD, tinnitus, vestibular, assessment and management

1.6 Audiological setup: sound treated room, equipment used, calibration, repair and maintenance, international standards for audiometric setup, instrument and testing

1.7 Aural rehabilitation: need/ goals, approaches in aural rehabilitation, effect of hearing loss, integration and educational placement; classroom amplification devices; adults and geriatrics rehabilitation; home training and counseling - meaning, scope, principles, types in context of hearing impairment

1.8 Noise measurement and hearing conservation: type and source, effects of noise; etiopathologies of NIHL; behavioral and electrophysiological test in NIHL; public education on noise hazards and hearing conservation; noise-related legislations, acts, and regulations

1.9 Manage hearing impaired children with special needs; different communication strategies; speech reading; auditory training, auditory verbal training in different conditions

2. **Speech and Language Pathology**

2.1 Normal speech language development; neuro-anatomy related to speech and language; theories and models of language acquisition

2.2 Articulation and phonology: normal development, models of phonological development; articulation and phonological disorder- assessment procedures and management approaches

2.3 Cleft lip and palate and glossectomy: definition, etiology, clinical features, assessment and management approaches

2.4 Voice disorders and laryngectomy: definition, etiology, clinical features, differential diagnosis, assessment and management approaches

2.5 Fluency disorder: definition, normal development, theories of fluency development, differential diagnosis of fluency disorders, assessment and management in adult and children

2.6 Adult motor speech disorders: dysarthria and apraxia - definition, etiology, clinical features, differential diagnosis, assessment and management approaches

2.7 Childhood motor speech disorders: cerebral palsy, dysarthria, apraxia, DOS - definition, etiology, classification, clinical features, assessment and management approaches; normal swallowing and dysphagia

2.8 Childhood communication disorder: definitions, etiology, classification and characteristics of communication disorders in children with hearing impairment; intellectual disability; autism spectrum disorder; ADD and ADHD; SLI and LLD; learning disability, acquired childhood aphasia; multiple impairments; assessment and management approaches

2.9 Adult language disorder: aphasia; definition, etiology, classification; other neuro-communication disorders: definition, causes, types/classification, assessment and treatment - RHD, dementia, primary progressive aphasia, sub-cortical aphasia, TBI; Assessment and Management Approaches

2.10 Communication, language and speech intervention: general intervention approaches and principles; specific intervention techniques, AAC, Alternative and Augmentative communication (AAC); role of parents, caregivers and family and team approach

2.11 Swallowing disorders: definition and phases of normal swallowing development of feeding; etiology, abnormal patterns of sallow; assessment and choose intervention approaches.

2.12 History and development of the profession of Speech- Language Pathology (SLP) specifically in Nepal, neighboring countries and abroad; major work activities of the SLP; various settings of speech – language therapy service delivery

Section (B) : 50 Marks

3. **ENT: Anatomy, Physiology and Diseases**

3.1 Otology: anatomy and physiology of external, middle and inner ear; etiology, pathophysiology, sign and symptom, investigation diagnosis, treatment and complication of ear disease

3.2 Rhinology: anatomy and physiology of nose and paranasal sinus; etiology, pathophysiology, sign & symptom, investigation diagnosis, treatment & complication of nasal disease

3.3 Laryngology: anatomy and physiology of larynx; etiology, pathophysiology, sign and symptom, investigation diagnosis, treatment and complication of laryngeal disease

4. **Basic Acoustics and Electronics**

4.1 Basic acoustics - vibrating systems, waves and resonance of a mass-spring vibrator, sound, pressure, power and loudness, pitch, timbre and acoustics of rooms.

4.2 Basics of electricity and electronics, basic electronic device and its applications, microphones as transducers, loudspeakers as transducers

4.3 Recording and reproduction of sound, high fidelity recording and playback, measuring instruments, development of micro electronics

5. **Psychology related to Speech and Hearing, Linguistics and Research**

5.1 Psychology related to speech and hearing: methodology in clinical psychology; role of clinical psychology in speech and hearing disorders; mental disorder and classification of abnormal behavior; stages of motor, cognitive, emotional and social development of a child; theories of conditioning and learning

5.2 Linguistics -introduction to linguistic, nature of language, communication, phonetics, phonology and classification of speech sounds: segmentals and suprasegmentals; Phonetics and fundamentals of acoustic phonetics, IPA chart - transcription, identification, reproduction; Psycholinguistics, neurolinguistics and application of linguistics

5.3 Statistics and research methods (audiology and speech language pathology) – data collection, normal distribution, correlation and regression, sampling, hypothesis testing, different parametric and non-parametric test, proposal writing, application of statistics to speech and hearing

6. **Basic Medical Sciences related to Speech and Hearing**

6.1 Divisions and functions of the nervous system: brain anatomy, lobes, Broadmann's areas, and vascular supply; reticular formations, basal ganglia, cerebellum, circle of Willis, and spinal cord structure; blood-brain barrier and cerebrospinal fluid formation and flow

6.2 Cranial nerves, their origin, nuclei, functions, and distributions: reflex actions and common reflexes; congenital cerebral and cranial defects: vascular shock and its relation to aphasia and speech disorders

6.3 Skull bones and detailed anatomy of the temporal bone; muscle properties and muscles of the neck, face and tongue

6.4 Anatomy and physiology of the respiratory system; respiration mechanisms, nervous control, efficiency tests and artificial respiration; types of breathing, hypoxia, asphyxia and cyanosis

7. **Legal and Ethical Practice and Advocacy**

7.1 Epidemiology and prevention of speech, language and hearing disorders

7.2 Statistics of speech and hearing disorders in Nepal; code of ethics, legislative support for rehabilitation- prepare policy, disability act

7.3 Duties and responsibilities of an ASLP in various settings; standards for professional conduct; advocate for appropriate services; documentation and communication

8. **सेवासम्बन्धी ऐन नियमहरु**

८.१ त्रि.वि ऐन, २०४९
८.२ त्रि.वि शिक्षक कर्मचारी सेवा सम्बन्धी नियम, २०५०
८.३ नेपाल स्वास्थ्य सेवा ऐन, २०५३
८.४ नेपाल स्वास्थ्य नियमावली २०५५

त्रिभुवन विश्वविद्यालय
सेवा आयोग

प्राविधिक सेवा, स्वास्थ्य समूह, अधिकृत तृतीय श्रेणी, प्राविधिक अधिकृत (स्पिच प्याथालोजी) पदको खुला प्रतियोगितात्मक लिखित परीक्षाको पाठ्यक्रम

(Specification Chart)

२०८१

प्रथम पत्र : वस्तुगत - बहुवैकल्पिक प्रश्न

पूर्णाङ्क: १०० **समय: १ घण्टा ३० मिनेट**

खण्ड	एकाई	विषय शीर्षक	अङ्क	प्रश्न संख्या	प्रश्न संख्या × अङ्क भार
A	1.	Audiology	50	100	100 प्रश्न × 1 अङ्क
	2.	Speech and Language pathology			
B	3.	ENT: Anatomy, Physiology and Diseases	50		
	4.	Basic Acoustics and Electronics			
	5.	Psychology related to Speech and Hearing, Linguistics and Research			
	6.	Basic medical sciences related to speech & hearing			
	7.	Legal and ethical Practice and Advocacy			
	8.	सेवासम्बन्धी ऐन नियमहरु			
कुल जम्मा			100	100	100 प्रश्न × 1 अङ्क

द्वितीय पत्र : विषयगत

पूर्णाङ्क: १०० **समय: ३ घण्टा**

खण्ड	एकाई	विषय शीर्षक	अङ्क	प्रश्न संख्या	प्रश्न संख्या × अङ्क भार
A	1.	Audiology	50	8 + 4	एकाई १, ३, ५ र ८ बाट ५ अंकका १/१ र हरेक एकाई बाट १० अंकको १/१ प्रश्न 8 प्रश्न × 10 अङ्क 4 प्रश्न × 5 अङ्क
	2.	Speech and Language pathology			
B	3.	ENT: Anatomy, Physiology and Diseases	50		
	4.	Basic Acoustics and Electronics			
	5.	Psychology related to Speech and Hearing, Linguistics and Research			
	6.	Basic medical sciences related to speech & hearing			
	7.	Legal and ethical Practice and Advocacy			
	8.	सेवासम्बन्धी ऐन नियमहरु			
कुल जम्मा			100	12	