

Question Paper

Exam Date & Time: 18-Apr-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER MSc. IN AUDIOLOGY DEGREE EXAMINATION - APRIL 2022
SUBJECT: AUD 5101 - TECHNOLOGY IN AUDIOLOGY
(2021 SCHEME)

All questions to be answered.

Marks: 100

Duration: 180 mins.

- | | | |
|-----|--|------|
| 1) | Explain working principles of EEG and event related potentials. | (20) |
| 2) | Summarize technology available in the domain of audiology for intraoperative monitoring. | (20) |
| 3A) | Describe how speaker recognition is done using technology. | (10) |
| 3B) | Role of SPECT and TMS in audiology practice. | (10) |
| 3C) | Importance of database in Audiology practice. | (10) |
| 3D) | Is knowledge of audio editing important for an Audiologist? If so justify. | (10) |
| 4A) | Remote consultations in Audiology. | (5) |
| 4B) | Complex cepstrum. | (5) |
| 4C) | Auto correlation. | (5) |
| 4D) | Auditorium acoustics principles. | (5) |

-----End-----

Question Paper

Exam Date & Time: 20-Apr-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER MSc. IN AUDIOLOGY DEGREE EXAMINATION - APRIL 2022
SUBJECT: AUD 5102 - COCHLEAR PHYSIOLOGY
(2021 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- 1) Describe the microanatomy of the cochlea with specific information on Organ of Corti, tectorial membrane, reticular lamina, lateral wall of cochlear duct and cochlear hair cells. (20)
- 2) Based on published articles, discuss the new findings on inner-ear efferents and their ability to modulate hair cell function. (20)
- 3) Discuss the clinical uses, interpretation, protocol and factors affecting Electrocochleography. (20)
- 4A) Discuss the role of prestin as the motor protein of cochlear outer hair cells. (10)
- 4B) Describe the inner hair cell physiology with reference to frequency and intensity coding. (10)

5. Write short notes on:

- 5A) Innervations of cochlea. (5)
- 5B) DPOAE fine structure. (5)
- 5C) Hyperacusis. (5)
- 5D) Greendwoods's technique of Cochlear mechanics. (5)

-----End-----

Question Paper

Exam Date & Time: 22-Apr-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER M.Sc. (AUDIOLOGY) DEGREE EXAMINATION - APRIL 2022
SUBJECT: AUD5104 - HEARING SCIENCES
(2021 SCHEME)

Marks: 100

Duration: 180 mins.

Answer all the questions.

- | | | |
|-----|--|------|
| 1) | Explain and critically evaluate various psychophysical procedures of threshold estimation. | (20) |
| 2) | Explain the importance of loudness perception in auditory diagnosis and rehabilitation. | (20) |
| 3A) | Explain the concept of pure tone and complex tone pitch perception. | (10) |
| 3B) | Explain the various methods to estimate the critical bandwidth. | (10) |
| 3C) | Explain central masking with its application. | (10) |
| 3D) | Explain the psychophysical laws and their application. | (10) |
| 4A) | Explain equal-loudness contour curves MAP and MAF | (5) |
| 4B) | Explain the forced-choice method | (5) |
| 4C) | Explain time-intensity trading | (5) |
| 4D) | Explain masking patten and excitation pattern | (5) |

-----End-----

Question Paper

Exam Date & Time: 23-Apr-2022 (10:00 AM - 01:00 PM)



MANIPAL ACADEMY OF HIGHER EDUCATION

FIRST SEMESTER M.Sc. IN AUDIOLOGY DEGREE EXAMINATION - APRIL 2022
SUBJECT: AUD5103 - NEUROPHYSIOLOGY OF HEARING
(2021 SCHEME)

Answer ALL questions.

Marks: 100

Duration: 180 mins.

- | | | |
|-----|--|------|
| 1) | Explain in detail the frequency coding in the auditory nerve. | (20) |
| 2) | Discuss the physiology of efferent system in hearing with suitable evidence. | (20) |
| 3A) | Explain role of primary and secondary auditory cortex in sound localization. | (10) |
| 3B) | Explain cellular organization and nerve supply of SOC with neat diagrams. | (10) |
| 3C) | Explain the physiology of IC and its role in hearing. | (10) |
| 3D) | Explain the action potentials. | (10) |
| 4A) | Graded potentials. | (5) |
| 4B) | Population coding. | (5) |
| 4C) | Types of neurotransmitters in the auditory system. | (5) |
| 4D) | Anatomy of internal auditory meatus. | (5) |

-----End-----