THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 1023] **OCTOBER 2023** **Sub. Code: 2822**

M.Sc. AUDIOLOGY
THIRD SEMESTER (From 2021-2022 onwards)
PAPER II – IMPLANTABLE AUDITORY DEVICES

Q.P. Code: 282822

Time: Three hours **Answer ALL Questions** **Maximum: 100 Marks**

I. Elaborate on: **(2x20=40)**

1. Elaborate on different types of Cochlear implants with internal, external components. Draw diagrams.

2. Subjective and objective methods of post-up programming of ABI and monitoring outcomes.

II. Write notes on: **(10x6=60)**

1. Candidacy for bone conduction implantable devices.
2. Types of middle ear implants.
3. Recent expanding criterias in cochlear implants.
4. Pre requisite to initiate a IHD programme.
5. Surgical procedures for ABI.
6. Care, maintenance and trouble shooting of Cochlear implants.
7. Components and types of Bone conduction implantable devices.
8. Intra-operative measures for Cochlear implant and the importance of it.
9. Critically evaluate speech coding strategies used in Cochlear implants.
10. Parameters to be considered while programming and mapping in cochlear implants

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0524] **MAY 2024** **Sub. Code: 2822**

M.Sc. AUDIOLOGY
THIRD SEMESTER (From 2021-2022 onwards)
PAPER II – IMPLANTABLE AUDITORY DEVICES

Q.P. Code: 282822

Time: Three hours **Answer ALL Questions** **Maximum: 100 Marks**

I. Elaborate on: **(2x20=40)**

1. Describe briefly the procedure and applications of intra-operative tests employed during CI surgery.

2. The outcomes of cochlear implants in children with cochlear malformations with supporting research evidences.

II. Write notes on: **(10x6=60)**

1. Biocompatibility properties for Implantable devices.
2. With a block diagram, explain the function of ABI sound processor.
3. The criteria of state and central government schemes available for the cochlear implant.
4. Advanced Combination Encoder strategy and its variations.
5. Importance of radiological assessment at various stages of cochlear implantation.
6. Role of cortical evoked potentials in monitoring the outcomes of the implantable auditory devices.
7. Device failures.
8. Candidacy for MEI.
9. Recovery functions and spread of excitation of eCAP.
10. Pre requisites for programming.

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THE TAMIL NADU DR. M.G.R. MEDICAL UNIVERSITY

[AHS 0525] **MAY 2025** **Sub. Code:2822**

M.Sc. AUDIOLOGY
THIRD SEMESTER (From 2021-2022 onwards)
PAPER II – IMPLANTABLE AUDITORY DEVICES

Q.P. Code: 282822

Time: Three hours **Answer ALL Questions** **Maximum: 100 Marks**

I. Elaborate on: **(2x20=40)**

1. Comprehensive candidacy assessment for implantable hearing devices (Audiological and non-audiological).

2. Techniques for programming cochlear implants with research evidences.

II. Write notes on: **(10x6=60)**

1. Research evidence on candidacy of Mid Brain Implant.
2. Techniques to identify auditory and non-auditory sensation in ABI.
3. Special considerations for mapping cochlear implants in cochlear nerve anomaly.
4. Management of device failures and poor performance of middle ear implants.
5. Electrode types/ design in cochlear implants.
6. Role of fNIRS in programming and monitoring outcomes in ABI and MBI.
7. Optimization of cochlear implant in SSD patients.
8. Speech/ sound coding strategy features, for enhancing music perception.
9. Clinical applications of eCAP measurements.
10. Research evidences on predicting outcome of ABI.

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