

SNS COLLEGE OF PHYSIOTHERAPY

Affiliated by the Tamil Nadu Dr. M. G. R. Medical University, Chennai.
Saravanampatti Post, Coimbatore – 641 035.

ELECTROTHERAPY- I

ELECTRICITY AND BASIC CONCEPTS OF ELECTRICAL STIMULATION

QUESTION BANK

Serial Number	Types of Question	Questions	Mapping to	Bloom's Taxonomy
1	15 Marks (Essay)	Describe the basic principles of electricity including direct current (DC) and alternating current (AC). Explain their applications in low-frequency electrotherapy.	TNMGRMU-2022	Understand
2	15 Marks (Essay)	Discuss Ohm's law and its relevance in electrical stimulation. Illustrate with examples from low-frequency currents used in physiotherapy.	Manipal-2021	Apply
3	15 Marks (Essay)	Explain the physiological effects of low-frequency currents on nerve and muscle tissues. Include mechanisms of depolarization and repolarization.	AIIMS-2020	Analyze
4	15 Marks (Essay)	Elaborate on the types of electrodes used in electrical stimulation and factors affecting electrode-skin interface impedance.	JIPMER-2019	Understand
5	15 Marks (Essay)	Describe the concept of faradic and galvanic currents. Compare their therapeutic uses in clinical practice.	TNMGRMU-2023	Analyze
6	15 Marks (Essay)	Discuss the safety precautions and contraindications in the application of low-frequency electrical stimulation.	Manipal-2020	Evaluate
7	15 Marks (Essay)	Explain the role of capacitors and inductors in modifying low-frequency currents for therapeutic purposes.	AIIMS-2021	Apply
8	15 Marks (Essay)	Analyze the strength-duration curve and its importance in electrical stimulation parameters selection.	JIPMER-2022	Analyze
9	15 Marks (Essay)	Describe the basic circuit components in electrotherapy devices and their function in generating low-frequency currents.	TNMGRMU-2021	Understand
10	15 Marks (Essay)	Evaluate the differences between monopolar and bipolar stimulation techniques in low-frequency electrotherapy.	Manipal-2019	Evaluate

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11	5 Marks (Short Notes)	Write short notes on the law of excitation in electrical stimulation.	AIIMS-2022	Remember
12	5 Marks (Short Notes)	Explain the factors influencing the intensity of electrical stimulation.	JIPMER-2020	Understand
13	5 Marks (Short Notes)	Describe the electrode types and their materials.	TNMGRMU-2020	Remember
14	5 Marks (Short Notes)	Discuss the physiological basis of muscle contraction via electrical stimulation.	Manipal-2022	Apply
15	5 Marks (Short Notes)	Outline the effects of frequency on nerve accommodation.	AIIMS-2019	Analyze
16	5 Marks (Short Notes)	Explain the concept of rheobase and chronaxie.	JIPMER-2021	Understand
17	5 Marks (Short Notes)	Describe the skin impedance in electrical stimulation.	TNMGRMU-2019	Remember
18	5 Marks (Short Notes)	What are the indications for low-frequency galvanic current?	Manipal-2023	Apply
19	5 Marks (Short Notes)	Discuss the waveform characteristics in low-frequency currents.	AIIMS-2023	Understand
20	5 Marks (Short Notes)	Explain the role of pulse duration in electrical stimulation.	JIPMER-2018	Analyze
21	2 Marks (Short Answers)	Define direct current (DC).	TNMGRMU-2022	Remember
22	2 Marks (Short Answers)	What is alternating current (AC)?	Manipal-2021	Remember
23	2 Marks (Short Answers)	State Ohm's law.	AIIMS-2020	Remember
24	2 Marks (Short	What is electrode polarization?	JIPMER-2019	Understand

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25	Answers) 2 Marks (Short Answers)	Define faradic current.	TNMGRMU-2023	Remember
26	2 Marks (Short Answers)	What is the unit of electrical resistance?	Manipal-2020	Remember
27	2 Marks (Short Answers)	Name two types of low-frequency currents.	AIIMS-2021	Remember
28	2 Marks (Short Answers)	What is motor point in stimulation?	JIPMER-2022	Understand
29	2 Marks (Short Answers)	Define impedance.	TNMGRMU-2021	Remember
30	2 Marks (Short Answers)	What is the significance of frequency in currents?	Manipal-2019	Understand