1. 2-Mark Questions

1. Define quantity of electricity.
2. What is meant by magnitude of current?
3. Differentiate between conductors and insulators.
4. State Ohm's Law.
5. What is a rheostat?
6. Define the electric field around a capacitor.
7. What is meant by charging a capacitor?
8. Name two types of capacitors used in physiotherapy.
9. What is a series rheostat?
10. Define the thermal effect of electric current.
11. What is meant by ionization in the context of electric current?
12. Define a magnetic substance.
13. What is a non-magnetic substance?
14. Name one property of a magnet.
15. What are magnetic lines of force?
16. Define electromagnetism.
17. State Lenz's Law.
18. What is an inductor?
19. Define reactance in an electrical circuit.
20. What is meant by impedance?
21. Define the potential of a condenser.
22. What is the Cosine Law in the context of physiotherapy?
23. Name one physical effect of heat in electrotherapy.
24. State one law governing radiation.
25. What is the Law of Grotthus?

2. 5-Mark Questions

1. Explain the concept of quantity of electricity and its measurement.
2. Discuss the factors affecting the resistance of a conductor.
3. Explain Ohm's Law with a simple example from physiotherapy equipment.
4. Describe the arrangement of resistances in series and parallel with diagrams.

5. Explain the electric field around a capacitor with a diagram.
6. Discuss the process of charging and discharging a capacitor.
7. Describe two types of capacitors and their applications in physiotherapy.
8. Explain the function of a series rheostat in physiotherapy equipment.
9. Discuss the thermal effect of electric current and its use in electrotherapy.
10. Explain the chemical effect (ionization) of electric current with an example.
11. Describe the properties of magnetic lines of force.
12. Explain the concept of electromagnetic induction with an example.
13. Discuss the magnetic effects of electric current in physiotherapy devices.
14. Explain the role of inductors in electrical circuits used in physiotherapy.
15. Describe the construction of a condenser used in electrotherapy.
16. Explain the factors determining the capacity of a condenser.
17. Discuss the Cosine Law and its significance in physiotherapy treatments.
18. Explain the physical effects of heat in electrotherapy applications.
19. Discuss one law governing radiation and its relevance in physiotherapy.
20. Explain the Law of Grotthus and its implications in electrotherapy.

3. 15-Mark Questions

1. Discuss the concepts of quantity of electricity and magnitude of current. Explain the role of conductors and insulators in electrical circuits used in physiotherapy.
2. Explain Ohm's Law in detail. Discuss the arrangement of resistances in series and parallel, including their applications in physiotherapy equipment, with diagrams.
3. Describe the electric field around a capacitor and the processes of charging and discharging. Explain the types of capacitors and their specific applications in the physiotherapy department.
4. Discuss the series and shunt rheostats, their construction, and their applications in physiotherapy equipment. Include diagrams to illustrate their function.
5. Explain the thermal, chemical (ionization), and magnetic effects of electric current. Discuss their applications in physiotherapy and the precautions to prevent electric shock.
6. Define magnetism and differentiate between magnetic and non-magnetic substances. Explain the properties of magnets, magnetic lines of force, and their relevance in physiotherapy devices.
7. Discuss electromagnetic induction, Lenz's Law, and the magnetic effects of electric current. Explain how these principles are applied in physiotherapy equipment, with examples.

8. Describe the construction and principles of a condenser. Explain its potential, capacity, charging, discharging, and use in electrotherapy, with relevant examples.
9. Explain the Cosine Law and its implications in optimizing the angle of application in physiotherapy treatments. Include examples and diagrams.
10. Discuss the physical effects of heat and radiation, including the laws governing radiation and the Law of Grotthus. Explain their implications and applications in electrotherapy.