

Course: BACHELOR OF PHYSIOTHERAPY

1st Semester Examination: December 2024

SUBJECT NAME: Electrotherapy-1 [23AB102]

Q. CODE: A064

Max Time: 3 Hours

Max Marks: 80

All Questions are Compulsory. Illustrate answer with diagrams wherever relevant/required

The figures in the right-hand margin indicate marks.

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| Q1 | Long Answer Question (Answer any one out of two) | (1 X 15 marks) |
| | a) Describe electromagnetic induction in detail and the principle and working of choke coil | |
| | b) Write in detail about the nature and principles of production of low frequency currents used for therapeutic purposes. Explain about high voltage galvanic current. | |
| Q2 | Long Answer Question (Answer any one out of two) | (1 X 15 marks) |
| | a) What are the principles of electrodiagnosis? Explain the relationship of Chronaxie and Rheobase in relevance to it. | |
| | b) Explain in detail about valves and condensers | |
| Q3 | Long Answer Question (Answer any one out of two) | (1 X 15 marks) |
| | a) Explain about magnetic energy and magnetic induction. Also write about Maxwell cork and Screw rule. | |
| | b) What are the physiological effects of heat? Explain the application of paraffin wax bath. | |
| Q4 | Short Answer Questions (Focused) (Answer any two out of three) | (2 X 5 marks) |
| | a) Write about moving coil mill ammeter. | |
| | b) Describe Semiconductor | |
| | c) What is Static electricity current? | |
| Q5) | Short Answer Questions (Applied) (Answer any two out of three) | (2 X 5 marks) |
| | a) What is Whirl pool bath? Explain its principles and usage. | |
| | b) Explain about neuromuscular junction with a diagram and describe its electrogenic response | |
| | c) Describe transformer | |

- Q6) Short Answer Case Based Question (Answer any two out of three) (2 X 5 marks)
- a) What are Safety devices in electrotherapy, name them.
 - b) Explain Iontophoresis with example.
 - c) Describe in brief about Series and parallel wiring
- Q7) Short Answer Problem Based Question (Answer any two out of three) (5 X 1 marks)
- a) Name the positively charged particle in an atom.
 - b) Define Joule's law
 - c) Define electric shock
 - d) Define rectifying current
 - e) What is the junction between two neurons that allows a signal to pass from one to other called?
