



BRAINWARE UNIVERSITY

Term End Examination 2024-2025

Programme – B.Physiotherapy-2021/B.Physiotherapy-2022/B.Physiotherapy-2023

Course Name – Electro Therapy - I

Course Code - BPTC402

(Semester IV)

Full Marks : 60

Time : 2:30 Hours

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 15=15

1. Choose the correct alternative from the following :

- (i) Select the therapeutic use of Eddy current
 - a) Produce heat
 - b) Produce nerve stimulation
 - c) Apply drugs in iontophoresis
 - d) None of these
- (ii) Select the unit of capacitance
 - a) Ampere
 - b) Volt
 - c) Farad
 - d) Joule
- (iii) Identify the absolute contraindication for electrical stimulation
 - a) Insensitive skin
 - b) Pacemaker
 - c) Unconscious patient
 - d) Ischemic heart disease
- (iv) Select the relation between capacitance and potential difference in a capacitor
 - a) Direct
 - b) Inverse
 - c) Equal
 - d) Linear
- (v) Select the device used to measure EMF of a cell
 - a) Wheatstone bridge
 - b) Potentiometer
 - c) Voltmeter
 - d) Ammeter
- (vi) Select the factor on which capacitance of a capacitor depends
 - a) Area of the plate
 - b) Material of the plate
 - c) Material and width of dielectric
 - d) All of these
- (vii) Identify the device which produces Eddy current
 - a) Solid conductor
 - b) Semiconductor
 - c) Laminated conductor
 - d) None of these
- (viii) Identify the correct statement in relation to electromagnetic radiation
 - a) They have same frequency
 - b) They have same velocity
 - c) They have same wavelength
 - d) None of these
- (ix) Identify the intensity of electric current at which electric shock is considered severe

- a) 10-20 mA
b) 15-20 mA
c) >20 mA
d) None of these
- (x) Establish the upper limit of low frequency current
a) 1000 Hz
b) 50 Hz
c) 100 Hz
d) 10 Hz
- (xi) Choose the appropriate current to know tendon rupture
a) Faradic Current
b) TENS
c) Sinusoidal Current
d) Galvanic Current
- (xii) Choose the characteristic of pulsed TENS
a) Uniphasic
b) Biphasic
c) Biphasic with even charge
d) Biphasic, even charge with equal or unequal pulse shape in both direction
- (xiii) Choose the correct full form of TENS
a) Transactional Electronic Natural Stimulation
b) Transcutaneous Electronic Pain Stimulation
c) Transcutaneous Electronic Nerve Stimulation
d) Transcutaneous Electrical Nerve Simulation
- (xiv) Identify the reason behind negativity of resting membrane potential
a) Potassium is more permeable than sodium
b) Three sodium ejected for two potassium
c) Potassium is brought into the cell and sodium expelled out of the cell
d) All of these
- (xv) Select the alternative name of monophasic Action potential in diadynamic current
a) Half sinusoidal
b) sinusoidal
c) alternating sinusoidal
d) pulsed sinusoidal

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Write a note on physiological and uses of Fluidotherapy. (3)
3. Explain the difference between step- up and step-down transformer. (3)
4. Indicate the complications of paraffin wax bath therapy. (3)
5. Explain the electrode placement and selection of current for ulnar nerve claw hand. (3)
6. Analyze the complications of UVR. (3)

OR

Illustrate the classification of UVR.

(3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Illustrate chronaxie and rheobase. (5)
8. Compare the advantages and disadvantages of Moist Heat Packs. (5)
9. Describe the contraindications and dangers of PWB. (5)
10. Explain therapeutic uses of IRR. (5)
11. Illustrate the hazards of IRR treatment. (5)
12. Determine the different types of tens and its uses. (5)

OR

Explain about indication and contraindication of TENS.

(5)
