



BRAINWARE UNIVERSITY

Term End Examination 2025-2026

Programme – B.Physiotherapy-2021/B.Physiotherapy-2022/B.Physiotherapy-
2023/B.Physiotherapy-2024

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) Choose condition for which Lidocaine iontophoresis is used
 - a) Scar tissue
 - b) Analgesia
 - c) Open Wound
 - d) Inflammation
- (iv) Choose the fibers stimulated by high TENS
 - a) A delta fibers
 - b) A beta fibers
 - c) C fibers
 - d) None of these
- (v) Choose the correct full form of TENS
 - a) Transactional Electronic Natural Stimulation
 - b) Transcutaneous Electronic Pain Stimulation
 - c) Transcutaneous Electronic Neural Stimulation
 - d) Transcutaneous Electrical Nerve Simulation
- (vi) Identify the process to avoid nerve accommodation
 - a) Surging the current
 - b) Using varying current
 - c) Using a varying current that rises and falls suddenly
 - d) No current
- (vii) Identify the type of muscle where insertional activity is found
 - a) Denervated muscle
 - b) Innervated muscle
 - c) Both of these
 - d) None of these

- (viii) Choose the type of current that is used to stimulate innervated muscles
- Faradic
 - Faradic Type
 - Surged Faradic
 - Interrupted Galvanic
- (ix) Identify the nerve fiber responsible for slow pain sensation
- A α
 - A β
 - A γ
 - C
- (x) Identify the wavelength of Infra-red
- Between Ultra violet and Visible radiation
 - Between Micro wave diathermy and Visible radiation
 - Between Micro wave diathermy and Ultra violet radiation
 - Between Micro wave diathermy and Ultrasound
- (xi) Identify the nerve fibres for fast conducting impulses
- C
 - B fibres
 - A gamma
 - A delta
- (xii) Select the correction option which comes after depolarization
- Hyperpolarization
 - potential difference
 - repolarization
 - resting condition
- (xiii) Select the neurotransmitter which helps in neuromuscular transmission
- Acetylcholine
 - dopamine
 - serotonin
 - endorphin
- (xiv) Select the temperature upto which hydrocollator packs are heated
- 25-45 °C
 - 75-80 °C
 - 50-60 °C
 - 10-20 °C
- (xv) Identify the reason behind cold induced vasodilatation
- Local neurogenic axon reflex
 - Local release of vasodilator hormone
 - Gradual paralysis of smooth muscles of vessels
 - All of these

Group-B

(Short Answer Type Questions)

3 x 5=15

- Explain the causes of electric shock. (3)
- Write a short note on Rheobase and Chronaxie. (3)
- Illustrate the Lewis Hunting Reaction. (3)
- Illustrate the indications and contraindications of contrast bath. (3)
- Explain the physiological effects and uses of IRR. (3)

OR

- Illustrate the efficacy of cryotherapy in pain control. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

- Illustrate the use of Faradic foot bath. (5)
- Illustrate the techniques of PWB application. (5)
- Illustrate about the strength duration curve. (5)
- Describe the physiological effects of faradic current on the body. (5)
- Explain the Gate Control Theory of Pain with appropriate diagram. (5)
- Explain the techniques of application of faradism under pressure. (5)

OR

- Explain the clinical application of Transcutaneous electrical nerve stimulation. (5)