



## BRAINWARE UNIVERSITY

Term End Examination 2024-2025

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

Course Name – Electro Therapy - II

Course Code - BPTC501

( Semester V )

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) 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
- (ii) Illustrate the preferable time after which electrodiagnosis should be performed after nerve injury
  - a) After 10 days
  - b) After 20 days
  - c) After 7 days
  - d) None of these
- (iii) Identify the chronaxie for denervated muscle
  - a) < 1 ms
  - b) < 10 ms
  - c) > 1 ms
  - d) > 10 ms
- (iv) Identify the E2 dose of UVR
  - a) 2 x E1 dose
  - b) 2.5 x E1 dose
  - c) 3 x E1 dose
  - d) 5 x E1 dose
- (v) Write the correct full form of LASER
  - a) Light Absorption by Stimulated Emission of Radiation
  - b) Light Amplification by Stimulated Emission of Radiation
  - c) Light Alteration by Stimulated Emission of Radiation
  - d) Light Adaptation by Stimulated Emission of Radiation
- (vi) Select the contraindication of IRR
  - a) Rheumatoid arthritis
  - b) Psoriasis
  - c) Dermatitis
  - d) Oedema

- (vii) Identify the UVR type in which erythema is best provoked
- UVA
  - UVB
  - UVC
  - All of these
- (viii) Select the infrared radiation may lasts up to
- 10 minutes
  - 20 minutes
  - 30 minutes
  - 1 minutes
- (ix) state the relation between the infrared radiation and the frequency is
- Directly proportional to the temperature
  - Inversely proportional to the temperature
  - No relation to temperature
  - relation to shape of object
- (x) Write the maximum penetration of IR
- 3000nm
  - 1000nm
  - 700nm
  - 15000nm
- (xi) Determine the risk factors of iontophoresis
- Chemical burns.
  - Electric shock.
  - Skin irritation and allergic dermatitis
  - All of these
- (xii) Represent Brust TENS as
- high frequency, short pulse, high intensity
  - Low frequency, high pulse , low intensity
  - high frequency, short pulse, low intensity
  - low frequency, short pulse, high intensity
- (xiii) Identify the correct among these, in iontophoresis which ion is used for open lesions healing property
- Analgesics
  - Magnesium oxide
  - zinc oxide
  - Calcium Chloride
- (xiv) Identifyb the rate of regrowth of nerve fibrils spouting average per day
- 0.5 mm
  - 1-2 mm
  - 3-4 mm
  - 5 mm
- (xv) Define Rebox type current is a
- low frequency
  - medium frequency
  - high frequency
  - None of these

### Group-B

(Short Answer Type Questions)

3 x 5=15

- Describe the therapeutic uses of microwave diathermy (3)
- Explain the clinical implications of electromyography (3)
- Define Strength duration curve and its uses (3)
- Define coupling media and its characteristics (3)
- Explain the dosage parameters of LASER in case of tendonitis. (3)

OR

Explain the physiological and therapeutic effects of LASER in wound healing (3)

### Group-C

(Long Answer Type Questions)

5 x 6=30

- Define action potential and the electrophysiology of muscle and nerve (5)
- Illustrate about the principle and different treatment parameters of medium frequency current with a example. (5)
- Summarize about the different classifications of LASER along with it's energy density, power density and it's safety precautions instructions. (5)

10. Techniques of application of galvanic type of current and it's contraindications (5)
11. Illustrate the components of biofeedback and it's implications in rehabilitation (5)
12. Explain the techniques of application of faradic type of current in case of deltoid inhibition (5)

OR

Explain the various parameters of interferential current and its physiological effects. (5)

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