BRAINWARE UNIVERSITY

Term End Examination 2023-2024
Programme – B.Physiotherapy-2021
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 father of EMG biofeedback
a) Michael Faraday b) Benjamin Franklin
c) John Basmajian d) None of these

(ii) state the tissue temperature is 10 – 110C then the metabolism reduces by
a) 25 b) 50
c) 75 d) None of these

(iii) Indicate the UVR type that can produce cataract
a) UVA b) UVB
c) UVC d) All of these

(iv) Choose the dose equals to E2 dose UVR
a) 2 times of E1 b) 2.5 times of E1
c) 3 times of E1 d) 5 times of UVR

(v) Write in which mostly UVR is absorbed in
a) Epidermis b) Dermis
c) subcutaneous tissue d) capillary loop

(vi) write in which the ultrasound applicationof the head is moved to
a) Smooth out the irregularities of near field b) Reduce irregularities of absorption
c) both 1 & 2 d) None of these

(vii) write the relationship between penetration and absorption of ultrasound energy is
a) Direct b) inversely
c) Linear d) None of these

(viii) Determine in which of the thse is correct for SD curve plotting

a) Constant current machine more comfortable
b) Constant voltage machine is more comfortable
c) Constant current comfortable & less accurate
d) Constant voltage comfortable and less accurate

(ix) select that emits by emits

a) Infrared
b) Microwave
c) Ultrasound
d) None of these

(x) Neonatal Jaundice can be treated by administer of

a) Red light
b) Blue Light
c) Infra light
d) Yellow light

(xi) Determine the useful electrotherapy modality for stress incontinence

a) TENS
b) Faradic stimulation
c) IFT
d) IDC

(xii) Choose the type of fiber that is selectively recruited when Faradic type current is applied to weak muscle

a) Type I fiber
b) Type IIa fiber
c) Type IIb fiber
d) None of these

(xiii) Identify the resting membrane potential of skeletal muscle

a) -60 mV
b) -90 mV
c) -70 mV
d) None of these

(xiv) Select for myelinated nerve fibers diameter is usually above

a) 2 µm
b) 5 µm
c) 7 µm
d) 3 µm

(xv) 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

Group-B

(Short Answer Type Questions) 3 x 5=15

2. Describe about rheobase and chronaxie (3)
3. Define Strength duration curve and its uses (3)
4. Describe the physiological effects of Microwave diathermy (3)
5. Define accommodation during electrical stimulation (3)
6. Define nerve conduction tests and it's types (3)

OR

Describe about the F- wave, H - reflex (3)

Group-C

(Long Answer Type Questions) 5 x 6=30

7. Describe about the principle of NMES and different types of electrodes, electrode coupling and it's placements. (5)
8. Illustrate the components of biofeedback and it's implications in rehabilitation (5)
9. Describe the different components of electromyography (5)
10. Explain the method of application and physiological effects of functional electrical stimulation in case reductions of spasticity (5)

11. Define accommodation of muscle and need for lowering skin resistance for current flow in tissues (5)
12. Describe the construction components and mechanism of the Electromyography used as in rehabilitation equipment. (5)

OR

Illustrate about the methods of application for nerve conduction velocity tests, f wave and H - reflex (5)

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