



MY-9537

Seat No. _____

Third Year B. P. T. Examination

January - 2018

Electrotherapy - II

Time : 3 Hours]

[Total Marks : 100

- Instructions :**
- (1) Write legibly.
 - (2) Draw diagrams where necessary.
 - (3) Figures to the right indicate marks.

SECTION - I

- 1** Answer any two from the following : **20**
 - (1) Write in detail about Transcutaneous Electrical Stimulation, its types, and technique of application.
 - (2) Describe Russian currents, its parameters, effects and uses in detail.
 - (3) Define motor point. Describe the motor point locations for upper limb and lower limb muscles with suitable diagrams.

- 2** Answer any two from the following : **10**
 - (1) Strength Duration Curve
 - (2) Types of Electrodes
 - (3) Biofeedback

- 3** Answer any five from the following : **10**
 - (1) H Reflex
 - (2) Fibrillation Potentials
 - (3) Normal motor nerve conduction velocity values
 - (4) Orthodramic versus Antidramic Conduction
 - (5) Define Combination Therapy
 - (6) Define Rheobase.

4 Multiple Choice Questions :

10

- (1) Phantom limb pain can be treated using
 - (a) Russian Current
 - (b) TENS
 - (c) Surged Faradic Current
 - (d) Iontophoresis
- (2) High intensity low frequency TENS is also called _____.
 - (a) Burst TENS
 - (b) Hi TENS
 - (c) Acupuncture Like TENS
 - (d) Modulated TENS
- (3) For local anaesthesia with Iontophoresis drug of choice would be _____.
 - (a) Glycopyronium Bromide
 - (b) Lignocaine
 - (c) Diclophenac Sodium
 - (d) Sodium Acetate
- (4) Denervated muscles can be stimulated with
 - (a) Long duration slow rising pulses
 - (b) Short duration sudden rising pulse
 - (c) Long duration sudden rising pulses
 - (d) Short duration slow rising pulse
- (5) Chronaxie for denervated muscles is
 - (a) <1 ms
 - (b) $<1\mu$ s
 - (c) $>100\mu$ s
 - (d) >1 ms
- (6) Treatment of choice for stress urinary incontinence is _____.
 - (a) TENS
 - (b) Surged Faradic Current
 - (c) Galvanic Current
 - (d) All of the above
- (7) As the current intensity is progressively increased, the first fibres to be stimulated are
 - (a) A alpha
 - (b) A beta
 - (c) A delta
 - (d) A gamma
- (8) All of the following are abnormal spontaneous activity in EMG except
 - (a) Fibrillation potentials
 - (b) Positive Sharp Waves
 - (c) Complex repetitive discharges
 - (d) Motor unit action potentials
- (9) Resistance at skin electrode interface can be reduced by
 - (a) Wetting the skin
 - (b) Warming the part to be treated
 - (c) Removing hair from hairy discharges
 - (d) All of the above
- (10) All of the following are medium frequency currents except
 - (a) Diadynamic current
 - (b) Russian current
 - (c) Interferential current
 - (d) Rebox current

SECTION – II

- 1** Answer any two from the following : **20**
- (1) Write in detail about Pain Gait Theory.
 - (2) Write in detail about Interferential Current Therapy technique, its advantages and clinical uses.
 - (3) Diadynamic currents.
- 2** Answer any two from the following : **10**
- (1) Effects of plain direct current on tissues.
 - (2) Contraindications of electrical stimulation.
 - (3) Clinical applications of EMG biofeedback with suitable examples.
- 3** Answer any five from the following : **10**
- (1) Parameters of High Voltage Pulsed Stimulation
 - (2) Critical fusion frequency (CFF)
 - (3) Faradic Galvanic Test
 - (4) Last muscle supplied by median and ulnar nerve
 - (5) Define Chronaxie
 - (6) Phases of action potential
- 4** Multiple Choice Questions : **10**
- (1) The frequency range of high TENS is
 - (a) 1-5 Hz
 - (b) 20-30 Hz
 - (c) 10-50 Hz
 - (d) 100-150 Hz
 - (2) Treatment of choice for flat foot is
 - (a) Faradic foot bath
 - (b) IFT
 - (c) TENS
 - (d) All of the above
 - (3) Propagation of an action potential in myelinated nerve fibre is called
 - (a) Saltatory Conduction
 - (b) Active transport
 - (c) Synaptic Transmission
 - (d) Demyelination
 - (4) S1 radiculopathy can be best assessed with _____.
 - (a) MNCV of sciatic nerve
 - (b) F wave
 - (c) SNCV of tibial nerve
 - (d) H reflex

