



NH-9537

Seat No. _____

Third Year B. Physiotherapy Examination

January – 2017

Electrotherapy-II

Time : **3** Hours]

[Total Marks : **100**

SECTION-I

- 1 LONG ESSAY (ANY TWO) 2×10=20
1. Define pain . Add a note on pain gate theory.
 2. Define TENS. Describe mechanism,types,indications,contraindications and technique of application of TENS.
 3. Write in detail about electro diagnostic tests with emphasis on SD curve.
- 2 SHORT ESSAY (ANY TWO) 2×5=10
1. Cathodal and anodal galvanism.
 2. Uses of bio feedback.
 3. Combination therapy.
- 3 VERY SHORT ESSAY : (ANY FIVE) 5×2=10
1. Chronaxie
 2. Motor unit
 3. Erb's palsy
 4. Skin resistance
 5. Faradic-Galvanic test
 6. Russain currents.

4 Multiple choice questions (MCQ)

10×1=10

1. The most severe degree of nerve lesion is :
 - a. Neurotmesis
 - b. Neuropraxia
 - c. Axonotmesis
 - d. None of the above
2. For Flat foot the best line of treatment is :
 - a. SWD
 - b. MWD
 - c. Faradic foot bath
 - d. None of the above
3. The beat frequency current is a :
 - a. High frequency current
 - b. Low frequency current
 - c. Medium frequency current
 - d. Rebox current
4. Stump or phantom limb pain can be treated using :
 - a. SWD
 - b. Ultrasound
 - c. Waxbath
 - d. TENS
5. Interrupted direct current stimulation of denervated muscle produces
 - a. Sluggish contractions
 - b. Brisk contraction
 - c. Tetanic contractions
 - d. No response
6. The most common danger with the use of constant direct current is
 - a. Electric shock
 - b. Electrolytic burn
 - c. Giddiness
 - d. All of the above
7. Medical iontophoresis has an effect on
 - a. Deep seated organs
 - b. Smooth muscles
 - c. Deep vessels
 - d. Superficial structures
8. S D curve is :
 - a. Quantitative test
 - b. Qualitative test
 - c. Both a. and b.
 - d. None of the above
9. Electrical silence at rest
 - a. Occurs in polymyositis
 - b. Denervation
 - c. Normal
 - d. Abnormal

10. A device that measures electrical resistance is
- a. Ohmmeter
 - b. Potentiometer
 - c. Voltmeter
 - d. Transformer

SECTION - II

- 5 LONG ESSAY (ANY TWO) 2×10=20
- 1. Explain in detail about IFT and different methods of application.
 - 2. Describe iontophoresis and add note on mechanism and physiological effect.
 - 3. Define modified direct current and its role in physiotherapy.
- 6 SHORT ESSAY : (ANY TWO) 2×5=10
- 1. Surge faradism
 - 2. Contraindication of electrical stimulation
 - 3. Faradism under pressure.
- 7 VERY SHORT ESSAY : (ANY FIVE) 5×2=10
- 1. Electrodes used in EMG
 - 2. Factors affecting NCV
 - 3. Synapse
 - 4. Saltatory conduction
 - 5. Uses of sinusoidal current
 - 6. Treatment of incisional pain.
- 8 Multiple choice questions : (MCQ) 10×1=10
- 1. In wound care iontophoresis technique uses :
 - a. Direct current
 - b. Alternating current
 - c. Sinusoidal currents
 - d. All of the above
 - 2. The electrically insulating material in nerve is
 - a. Axon
 - b. Dendrites
 - c. Myline sheath
 - d. Node of Ranvier

3. The most effective modifications of Faradic type current is
 - a. Surging
 - b. Interruption
 - c. a. and b.
 - d. None of the above
4. Which of the following ion is used for oedema reduction using iontophoresis ?
 - a. Acetate
 - b. Copper
 - c. Salicylate
 - d. Hyaluronidase
5. EMG is used in diagnosis of
 - a. Myopathies
 - b. Myotonia
 - c. LMN lesion
 - d. All of the above
6. Fasciculation potentials are found in
 - a. Complete denervation
 - b. Muscle cramps
 - c. Reinnervation
 - d. Potential denervation
7. The low TENS works on the principle of
 - a. Endogenous opiate theory
 - b. Pain gate theory
 - c. Special theory
 - d. None of the above
8. The advantage of rhythmic mode in IFT is
 - a. Prevents the unnecessary stimulation
 - b. Prevents nerve habituation
 - c. Facilitates nerve
 - d. None of the above
9. Wallerian degeneration takes about
 - a. 1 week
 - b. 50 days
 - c. 14 days
 - d. 1 month
10. The unit of energy is
 - a. Calorie
 - b. Joule
 - c. Newton
 - d. Watt