



PX-9007 Seat No. _____
Second Year B. Physiotherapy Examination
July - 2018
BCM-9007 : Electro Therapy - I

Time : 3 Hours]

[Total Marks : 100

Instructions :

- (1) Write to the point.
- (2) Draw neat labeled diagrams wherever necessary.
- (3) Figures on right side indicates marks.
- (4) Each section should be written in separate answer books.

SECTION - I

- 1 Long Essays : (Any Two) 20**
 1. Write the Physiological and Therapeutic Effects of Short wave Diathermy.
 2. Discuss in detail about UVR, its Indications and Therapeutic effects.
 3. Describe LASER and its Indications.

- 2 Short Essays : (Any Two) 10**
 1. Circulatory response and uses of Cryotherapy
 2. Law of Inverse Square
 3. Types of UV lamps

- 3 Very Short Essays : (Any Five) 10**
 1. Coupling media
 2. Photosensitizers
 3. Spacing in SWD
 4. Dipole Rotation
 5. Scalds
 6. PUVA

- 4 Multiple Choice Questions : 10**
 1. The frequency, wavelength and Velocity of SWD is
 - a. 25.3 Mhz, 12 m, 2×10 power of 7 m/s
 - b. 27.12 Mhz, 11 m, 3×10 power of 7 m/s
 - c. 26.5 Mhz, 12 m, 5×10 power of 7 m/s
 - d. 23.5 Mhz, 12 m, 9×10 power of 7 m/s

2. Low impedance is due to
 - a. High dielectric constant, high conductivity
 - b. Low dielectric constant, low conductivity
 - c. Low dielectric constant, high conductivity
 - d. High dielectric constant, low conductivity
3. Which is not the deep therapy
 - a. SWD
 - b. MWD
 - c. IRR
 - d. Ultrasound
4. As an Ultrasound pulse moves through tissue in a patient's body it will not undergo a change in
 - a. Frequency
 - b. Amplitude
 - c. Physical Size
 - d. Intensity
5. Which of the following forms of heat therapy relies mainly on conduction ?
 - a. Heat Lamp
 - b. Microwave Diathermy
 - c. Hot packs
 - d. Ultrasound
6. How does the body attempt to cope with hyperthermia ?
 - a. By increasing muscular activity
 - b. With peripheral vasodilation and sweating
 - c. With peripheral vaso constriction and shivering
 - d. By reducing heat loss by radiation and convection
7. This is the effective method used for the treatment of extremities
 - a. Ice Towels
 - b. Cold Immersion
 - c. Ice packs
 - d. Ice cube massage
8. The alternation of vaso constriction and vasodilation during cold therapy is called
 - a. Cryotherapy
 - b. Hunting response
 - c. Hunting Circulation
 - d. Lewis reaction
9. Progression of E4 dose in UVR is
 - a. 100% of previous exposure
 - b. 10 times of E1 dose
 - c. No progression
 - d. Depends on the condition
10. What is the most effective way to deposit heat in bones and joints ?
 - a. Ultrasound
 - b. IRR
 - c. Heat packs
 - d. Diathermy

SECTION – II

- 1 Long Essays : (Any Two) 20**
1. Write in detail about Microwave Diathermy and its Physiotherapeutic Uses.
 2. Explain the Physiological and Therapeutic Effects of Ultrasound.
 3. List the various superficial and deep heating modalities. Discuss in detail about the physiological and therapeutic effects.
- 2 Short Essays : (Any Two) 10**
1. Contrast Bath
 2. Indications of LASER
 3. Physiological Effects of Waxbath
- 3 Very Short Essays : (Any Five) 10**
1. Piezo electric effect
 2. Vant Hoff's Law
 3. Types of IRR Generators
 4. Alopaecia Areata
 5. Difference between Superficial and Deep Heating
 6. Coherence
- 4 Multiple Choice Questions : 10**
- 1 Type of heat transfer via medium such as the movement of air or water is called as
 - a. Convection
 - b. Electrical
 - c. Conduction
 - d. Radiation
 2. Alopaecia Totalis is
 - a. Complete loss of hair on the scalp
 - b. Loss of hair partially due to some infection
 - c. Loss of hair due to deficiency
 - d. Complete loss of hair all over the body
 3. Thickening of Epidermis in UVR occur's after _____ hours of exposure
 - a. 24
 - b. 12
 - c. 72
 - d. 96

4. The longer wavelength of IRR is absorbed by
 - a. Subcutaneous Tissue
 - b. Deep epidermis
 - c. Superficial Epidermis
 - d. Upto Dermis

5. The strength of the application of IRR can be increased by
 - a. Moving lamp near to the patient
 - b. Increasing the number of bulbs in tunnel bath
 - c. By adjusting the variable resistance
 - d. All of the above

6. The filament in IRR, is a coil of wire made of
 - a. Tungsten
 - b. Copper
 - c. Lead
 - d. Brass

7. The type of LASER used by physiotherapists is
 - a. Power LASER
 - b. Mid LASER
 - c. Soft LASER
 - d. Both (b) and (c)

8. Conversion of High Frequency alternating voltage into a mechanical vibration is
 - a. Piezo Electric Effect
 - b. Reverse Piezo Electric Effect
 - c. Tranducer
 - d. Attenuation

9. The number of complete wave which pass a fixed point in unit time is
 - a. Hertz
 - b. Frequency
 - c. Wavelength
 - d. Amplitude

10. This is not a therapeutic effect of UV Radiation
 - a. Pigmentation
 - b. Desquamation
 - c. Erythema
 - d. Growth of Epithelial Cells