



BA-9007 Seat No. _____
Second Year B. P. T. Examination
March - 2021
Electrotherapy - I

Time : 3 Hours]

[Total Marks : 100

SECTION-I

- 1 Answer any two from the following : 20
- (a) What is SWD ? Explain different methods of applications of the same.
 - (b) LASER
 - (c) How the dosage of UVR can be calculated ?
- 2 Answer any two from the following : 10
- (a) Luminous and non luminous IRR
 - (b) Near and Far fields
 - (c) Electromagnetic spectrum
- 3 Answer any five from the following : 10
- (a) Grothus law
 - (b) Contrast bath
 - (c) Piezoelectric effect
 - (d) Latent heat
 - (e) Beam non uniformity ratio (BNR)
 - (f) Scalds
- 4 Multiple Choice Questions : 10
- (1) Initial reaction of ice application is _____.
(A) Fall in blood pressure (B) Rise in blood pressure
(C) Vasoconstriction (D) Vasodilatation
 - (2) Device used in Microwave Diathermy _____.
(A) Transformer (B) Antenna
(C) Diode (D) Magnetron
 - (3) Total loss of body hair is _____.
(A) Alopecia areata (B) Alopecia totalis
(C) Alopecia universalis (D) None of above

- (4) Treatment by natural sunlight is known as _____
 (A) Heliotherapy (B) Radiotherapy
 (C) Photoradiotherapy (D) All of above
- (5) Cavitation is the physiological effect occurs in _____
 (A) SWD (B) MWD
 (C) PWB (D) Ultrasound
- (6) Maximum absorption of microwaves occurs at _____
 (A) bone (B) skin
 (C) muscle (D) fat
- (7) Medical frequency for SWD is _____.
 (A) 27.12 MHz (B) 2.712 MHz
 (C) 2.712 KHz (D) 27.12 KHz
- (8) Cryotherapy is the only suitable modality for _____.
 (A) Trapezitis (B) Tennis elbow
 (C) Spasticity (D) Spasm
- (9) Metal implants are contraindicated in _____.
 (A) cryotherapy (B) PWB
 (C) Hot packs (D) SWD
- (10) Tridymite formation occurs in _____.
 (A) IRR lamp (B) LASER
 (C) Magnetron (D) UVR lamp

SECTION-II

- 5** Answer any two from the following : **20**
 (a) What is US ? Explain the thermal and non thermal effects in detail.
 (b) Explain Cryotherapy.
 (c) Discuss Hydrotherapy.
- 6** Answer any two from the following : **10**
 (a) PUVA apparatus
 (b) Indications and contraindications of PWB
 (c) Indications of UVR
- 7** Answer any five from the following : **10**
 (a) Inverse square law
 (b) Electric shock
 (c) Composition of wax bath
 (d) Kromayer lamp
 (e) Lewis Hunting Reaction
 (f) Coupling media

8 Multiple Choice Questions.

10

- (1) Most used method of ice application in sports _____
(A) Ice massage (B) Sprays
(C) ice towels (D) None
- (2) Pigmentation occurs with _____.
(A) UVR (B) IRR
(C) Hot packs (D) Whirlpool bath
- (3) Progression of E4 dose in UVR can be _____
(A) 10 times of E1 (B) Repeat the last dose
(C) E3*5 (D) No progression is required
- (4) Odd one out.
(A) SWD (B) IRR
(C) Hot packs (D) PWB
- (5) Wavelength of UVB is
(A) 315-400 nm (B) 280-315 cm
(C) 280-315 nm (D) 315-400 cm
- (6) Standing wave information is the danger of _____
(A) SWD (B) PWB
(C) LASER (D) US
- (7) A 23 year old female comes with the history of ankle sprain before 1 hour. Which is the best modality of choice ?
(A) PWB (B) Ice Pack
(C) Moist pack (D) SWD
- (8) SWD can be given in case of _____
(A) Fever (B) recent radiotherapy
(C) active tuberculosis (D) None of above
- (9) UVR reacts with oxygen and produces.....
(A) Ozone (B) Neon
(C) Argon (D) Lithium
- (10) Minimal perceptible erythematous dose is _____
(A) E1 (B) E2
(C) E3 (D) E4
