Avinashilingam Institute for Home Science and Higher Education for Women

Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD (now MoE)
Re-accredited with 'A++' Grade by NAAC. CGPA 3.65/4, Category I by UGC
Coimbatore - 641 043, Tamil Nadu, India

Bachelor's Degree Examination – May 2025
VI Semester

Class : III UG **Time: 3 Hours**
Major : Physiotherapy **Max. Marks: 100**

22BPTC29 Electrotherapy-High Frequency Current

Course Outcomes:

On the successful completion of the course, students will be able to

CO1: Knowledge about various types of therapeutic high frequency currents and its physiological,therapeutic effects gained.
CO2: Knowledge about LASER therapy and its uses gained.
CO3: Effects of various types of heat therapy and method of applications
CO4: Knowledge about Cryotherapy and its method of application, effect and uses gained.
CO5: Knowledge about recent physical modalities and its method of application, effect and uses gained. Practical application of electrotherapy modalities for various conditions.

Part A **10 x 1 = 10**
Choose the Correct Answer

1. Identify the correct order of Microwave Diathermy apparatus CO1 K1
   a. Power supply - Magnetron - Coaxial cable - Reflector
   b. Power supply - Timing circuit - Magnetron - Coaxial cable - Reflector - Emitter
   c. Power supply - Magnetron - Coaxial cable - Transducer
   d. Power supply - Coaxial cable - Magnetron - Reflector - Emitter

2. Select the position of Ultraviolet rays in Electromagnetic spectrum, it lies between CO1 K2
   a. Visible light & Infrared rays b. Visible light & X-rays
   c. Short waves & Infrared rays d. Gamma rays & X-rays

3. Identify the Suberythemal dose CO1 K1
   a. 2.5 x E1 time b. 1/2 E1 time c. 5 x E1 time d. 10 x E1 time

4. Select the wavelength of Ruby LASER CO2 K2
   a. 632.8 nm b. 694.3 nm c. 904 nm d. 705 nm

5. Select the appropriate terminology is the amount of energy required to raise the temperature of a material/ body. CO3 K2
   a. Specific Heat b. Latent Heat
   c. Latent Heat of Fusion d.Latent Heat of Vaporization

6. Identify the temperature inside the hydrocollator CO3 K1
   a. 65°-80° C b. 70°-80° C c. 80°-90° C d. 30°-40° C

7. Select the Contraindication for cryotherapy CO4 K2
   a. Osteoarthritis b. Acute Inflammation
   c. Raynaud's disease d. Grade I sprain

8. Extracorporeal Shockwave Therapy devices contain Select the appropriate one. CO5 K2
   a. Longitudinal compression waves b. Diverging Focused Shock waves
   c. Standing waves d. Converging Focused Shock waves

9. Identify the terminology which is mainly involved in cryotherapy CO4 K1
   a. Vant Hoff's law b. Ohm's law
   c. Lewis Hunting Response d. Joules law

10. In olden days, Shock wave therapy was used to treat identify it. CO5 K1
    a. Kidney Stone b. Plantar Fasciitis
    c. Tennis elbow d. Stress fractures

Part B **5 x 6 = 30**

Answer ALL questions

Each answer should not exceed 400 words or two pages

11.a. Describe about Principles, effects and uses of Pulsed Ultrasound.	CO5 K1
(or)	
11.b. Describe about Construction and Working of Microwave Diathermy.	CO1 K1
12.a. Explain about the properties of High Frequency Currents.	CO1 K2
(or)	
12.b. Explain about the Indications and Contra-indications of Fluidotherapy.	CO3 K2
13.a. Explain about the Principles and Construction of Transformers.	CO1 K2
(or)	
13.b. Explain about various indications, contra-indications and therapeutic uses of Shockwave Therapy.	CO5 K2
14.a. Distinguish between Microwave Diathermy and Shortwave Diathermy.	CO1 K4
(or)	
14.b. Describe about Ice packs and Immersion	CO4 K1
15.a. Describe about the effects of Paraffin wax on Sensory nerves and Skin.	CO3 K1
(or)	
15.b. Enumerate the efficacy and precautions of LASER.	CO2 K1

Part C **5 x 12 = 60**

Answer ALL questions

Each answer should not exceed 800 words or four pages

16.a. Explain physiological and therapeutic effect of UV radiation.	CO3 K2
(or)	
16.b. Explain in detail about Phonophoresis.	CO5 K2
17.a. Explain about the types of generators, working and physiological effects of Infrared radiation.	CO1 K2
(or)	
17.b. Define Shockwave therapy. Enumerate the construction, working, technique of application and dosage of Shockwave Therapy.	CO5 K1
18.a. Define LASER. Describe about its properties, production, therapeutic indications and contra-indications.	CO2 K1
(or)	
18.b. Explain about Cryokinetics and its effect. Add a note on various indications and contra-indications of Cryotherapy.	CO4K2
19.a. Explain in detail about the different types of lamps used in Ultraviolet production. Add a note on Photosensitization.	CO1 K2
(or)	
19.b. Explain in detail about Moist Heat Therapy (Fluidotherapy).	CO3 K2
20.a. Enumerate the different methods of heating tissues, effects and indications of Paraffin wax.	CO3 K1
(or)	
20.b. Describe about physical principles, physiological effects, uses and techniques of applications in Cryotherapy.	CO4 K1

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