B.P.T. [2nd Prof.]

BF/2009/11

Electrotherapy-II

M.M. : 90 **Time : 3 Hours**

SECTION - A

All questions are compulsory. Answer to each question upto 5 lines in length. Each question carries 2 Marks. [20]

1. Frequency and wavelength for SWD and MWD.
2. Coupling agent in Ultrasound.
3. Phase difference and coherence in EM rays.
4. Laws of Refraction.
5. Rheobase.
6. Explain convection mechanism of heat transfer.
7. Define ionizing and non-ionizing radiations.
8. Axonotmesis and its effects.
9. Tuning of SWD.
10. Ohm's law.

SECTION – B

Attempt any 8 questions. Answer to each question upto 2 pages in length. Each questions carries 5 Marks. [40]

1. What is Piezoelectric effect? Explain its role in production of Ultrasound.
2. Compare and contrast the effects of SWD and MWD.
3. Explain the production of medium frequency currents.
4. Discuss the various properties of a LASER beam.
5. Physiological and therapeutic effects of cold application to human tissues.
6. Describe the parameters of normal Motor Unit Action Potential (MUAP) recorded in EMG.
7. Discuss various instrumentation used for bio feed back.
8. Give the indications and contraindications of Medium frequency currents with emphasis on IFT.
9. Explain the technique of application and patient preparation for LASER.
10. Explain the cold compression therapy.
11. Iontophoresis - its mechanism and therapeutic uses.
12. Properties of Sound Waves.

SECTION – C

Attempt any 2 questions. Answer to each question upto 5 pages in length. Each questions carries 15 Marks. [30]

1. Discuss in detail the production of SWD with help of circuit diagram.
2. Discuss in detail the Physiological and Therapeutic effects of Heat.
3. Explain the various Physiological effects of Ultrasound therapy. What dosimetry protocol will you use clinically.
4. Explain the principle, physiological effects, Indications and contraindications of Intermittent compression therapy.
