

- Q.18 Explain Inductive method application of short wave diathermy.
- Q.19 Explain any two Therapeutic instruments which are used in operation theatre.
- Q.20 Explain the working of fluidotherapy with its applications.
- Q.21 What are the Phototherapy . Explain different types of phototherapy.
- Q.22 Explain wax therapy unit. Explain its working.

#### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

- Q.23 What are Microwave diathermy . Explain the production of microwave with block circuit diagram.
- Q.24 Explain the Electromagnetic spectrum and wave form used in electromagnetic spectrum.
- Q.25 Explain the safety issues related to therapeutic equipment.

No. of Printed Pages : 4  
Roll No. ....

223254

#### 5th Sem. / Medical Electronics

#### Subject : Therapeutic Medical Instrumentation (TMI)

Time : 3 Hrs.

M.M. : 60

#### SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

- Q.1 What is a primary benefit of ultrasonic diathermy.
- a) It creates cold sensations .
  - b) It increases heart rate.
  - c) It can help alleviate pain.
  - d) It uses low-frequency sound waves.
- Q.2 What is the purpose of Transcutaneous Electrical Nerve Stimulation (TENS ) in electrotherapy
- a) To block pain signals by stimulating nerves.
  - b) To deliver medications through the skin .
  - c) To generate heat in tissues.
  - d) To improve muscle strength and tone.

- Q.3 What can ultraviolet radiation cause to human skin.
- Sunburn and skin cancer
  - Growth of nails
  - Increase in body temperature
  - Tinting of hair.
- Q.4 Which of the following is NOT a benefit of high-frequency current therapy.
- Increased range of motion
  - Reduces the need for water
  - Pain relief
  - Reduces muscle spasms.
- Q.5 What does a magnetic stimulator use to study brain function .
- Sound waves
  - Powerful magnetic fields
  - Light pulses
  - Electric shocks.
- Q.6 Which of these conditions is commonly treated with ultrasonic diathermy.
- |              |              |
|--------------|--------------|
| a) Arthritis | b) Asthma    |
| c) Diabetes  | d) Headache. |

## SECTION-B

**Note:** Objective/ Completion type questions. All questions are compulsory. (6x1=6)

- Q.7 What is the electromagnetic spectrum .
- Q.8 What is an ultrasonic simulator.
- Q.9 What is electrotherapy.
- Q.10 What is a hydro collator unit.
- Q.11 What is a radiant warmer.
- Q.12 What is a traction unit

## SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

- Q.13 Explain Capacitive plate method application of short wave diathermy.
- Q.14 What is High frequency current therapy and how it works.
- Q.15 Explain the different types of electromagnetic radiation found in the spectrum.
- Q.16 What are Diathermy . Explain the circuit diagram of Short wave diathermy.
- Q.17 What is the role of electric stimulation in muscle and nerve response.