

- Q.26 What are microwave diathermy. Explain the production of microwave.
- Q.27 What are Autoclave. Explain its components in brief
- Q.28 Explain Inductive method application of short wave diathermy.
- Q.29 What are dialyzer. Explain Hollow fiber Hemodialysis .
- Q.30 What are Laser. Describe Coherence characteristics
- Q.31 What are Autoclave. Explain working principle of Autoclave.
- Q.32 Explain any two Therapeutic instruments which are used in operation theatre.
- Q.33 Explain the Application of laser in medicine
- Q.34 Explain role of Central sterile Supply Department in hospital
- Q.35 Explain main elements of LASER in brief.

#### SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)

- Q.36 What are Hemodialysis . Explain the working principle of hemodialysis machine with block diagram.
- Q.37 Draw diagram & Explain working principle of surgical diathermy Analyses in detail.
- Q.38 What are Microwave diathermy. Explain the production of microwave with block circuit diagram

No. of Printed Pages : 4

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**5th Sem / Med. Eltx.**

**Subject:- Therapeutic Medical Instrument (TMI)**

Time : 3Hrs.

M.M. : 100

#### SECTION-A

**Note:** Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 Following is not a candidate materials for laser source in fibre optics
- a) ND - YAG                      b) He-Ne
- c) Argon                          d) Phosphorous
- Q.2 Removal and killing of all organism are known as
- a) Destruction                  b) Sterilization
- c) Pasteurization              d) None of these
- Q.3 What is a disadvantage of LED light over LASER light
- a) Non Coherence light source
- b) Hardly Available
- c) Consuming more power
- d) Costlier than Laser
- Q.4 What is the common temperature used in autoclaves
- a) 109 degree                  b) 122 degree
- c) 135 degree                  d) 142 degree

- Q.5 Which of the following is not a property of Laser
- Coherence
  - chromaticity
  - High Intensity
  - Directionality
- Q.6 What of the composition of the membrane that are used in dialysis
- Chitin
  - polyethylene
  - Poly vinyl chloride
  - Cellulose
- Q.7 Which of the following is a not a fundamental property of a laser light
- it possess high degree of coherence
  - It can be generated with low intensity
  - it can be produced with narrow line width
  - it can be produced with narrow beam width
- Q.8 Autoclaves are used in the medical applications to perform
- vulcanization
  - Heating
  - Sterilization
  - Cleaning
- Q.9 What is the chief principle of Dialysis
- Capillary action
  - Adhension
  - Reverse - Osmosis
  - Cohension
- Q.10 Ultrasound are applied for obtaining image
- Liver
  - Spleen
  - kidney
  - All of these

## SECTION-B

**Note:** Objective type questions. All questions are compulsory. (10x1=10)

- Q.11 What are photon
- Q.12 Name instruments which are used in Surgical Diathermy
- Q.13 Write two names of therapeutic instruments
- Q.14 What is Cardiac pacemaker
- Q.15 What is Microwave
- Q.16 What is Higher Energy State
- Q.17 What is Heat therapy
- Q.18 What is Autoclave
- Q.19 Define Dialyzer
- Q.20 One application of Laser in Industries

## SECTION-C

**Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)

- Q.21 What are Laser. Explain working principle of laser
- Q.22 Explain Ultrasonic therapy unit.
- Q.23 What are diathermy. Explain the circuit diagram of Short wave diathermy
- Q.24 What are CSSD. Explain the layout of CSSD in hospital
- Q.25 Explain working principle of dialysis in the artificial Kidney.