

- Q.26 What are Laser. Explain working principle of laser.
- Q.27 What are Autoclave. Explain working principle of Autoclave.
- Q.28 Define Heat therapy. Explain influence of heat therapy under electric current.
- Q.29 What are dialyzer. Explain parallel flow dialyzer.
- Q.30 What are sterilization. Explain different types of sterilization.
- Q.31 What are Autoclave. Explain its components in brief.
- Q.32 What are Sphygmanometer. Explain its working.
- Q.33 What are Autoclave. Explain its connection for inlets & Outlets with block diagram.
- Q.34 Draw diagram of hemodialysis machine and explain it.
- Q.35 What are microwave. Explain production of microwave.

SECTION-D

- Note:** Long answer type questions. Attempt any two questions out of three questions. (2x10=20)
- Q.36 What are Laser. Explain its working principle & application in detail.
- Q.37 Draw diagram & Explain working principle of surgical diathermy Analysis in detail.
- Q.38 What are Dialysis. Explain the working principle of hemodialysis machine with block diagram.

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**5th Sem / Branch : Med. Eltx.
Sub.: Therapeutic Medical Instrumentation (TMI)**

Time : 3Hrs. M.M. : 100

SECTION-A

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

- Q.1 Autoclave are used in medical application to Perform _____.
a) Vulcanization b) Heating
c) Sterilization d) Cleaning
- 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 the frequency range of the sound used for ultrasound diathermy?
a) 0.1 - 0.7 MHz b) 0.7 - 3.3 MHz
c) 3.3 - 5 MHz d) 5 - 15 MHz
- Q.4 What mixture of gases are used in anesthesia?
a) O₂ and N₂O b) O₂ and CO₂
c) CO₂ and N₂O d) O₂, CO₂ and N₂O
- Q.5 Full form of LASER
a) Light amplification by stimulated emission of radiation

- b) Light absorbent and stimulated emission of radiation
c) Light absorbing solar energy radiation
d) Light amplification singular emission of radiation
- Q.6 AEP stands for _____
a) Auditory Evoked Potential
b) Auxiliary Evoked Potential
c) Audiovisual Evoked Potential
d) Ambulatory Evoked Potential
- Q.7 What is the function of a Nebulizer?
a) To supply moisture in the form of droplets
b) To maintain temperature
c) To maintain the gas levels of individual gases
d) To check the safety of valves
- Q.8 What is the inner surface of autoclaves made of?
a) Mild steel b) Copper
c) Stainless steel d) Aluminum
- Q.9 What is the chief principle of Dialysis
a) Capillary action b) Adhesion
c) Reverse Osmosis d) Cohesion
- Q.10 Waste autoclaves process waste in?
a) Batches b) Continuous flow
c) Both A & B d) None of the above

SECTION-B

- Note:** Objective type questions. All questions are compulsory. (10x1=10)
- Q.11 Full form of CSSD.
Q.12 What are Hemodialysis.
Q.13 What are Sterilization.
Q.14 What are Systolic pressure.
Q.15 Name instruments which are used in Blood Pressure.
Q.16 Define Coagulation.
Q.17 What are Electron Transition.
Q.18 Write two name of Operation theatre instruments.
Q.19 Define Ventilator.
Q.20 One application of Laser in Military.

SECTION-C

- Note:** Short answer type questions. Attempt any twelve questions out of fifteen questions. (12x5=60)
- Q.21 Explain application of laser in Science and technology.
Q.22 What are shortwave diathermy. Explain shortwave diathermy Technique.
Q.23 What are diathermy. Explain the circuit diagram of Mircowave wave diathermy.
Q.24 What are CSSD. Explain the layout of CSSD in hospital.
Q.25 Explain Transcutaneous Electric Nerve Stimulator.