

- Q.29 What are sterilization. Explain different type of sterilization.
- Q.30 Explain Different component of Laser.
- Q.31 What are Dialyzer. Explain Hollow fibre Dialyzer.
- Q.32 What are Laser. Explain working principle of Laser of laser.
- Q.33 Draw & Explain Block diagram of haemodialysis machine.
- Q.34 Explain Pulsed Ruby Laser.
- Q.35 What are Surgical Diathermy. Explain Type of waveform generated by surgical diathermy machine.

#### **SECTION-D**

**Note :** Long Answer type question. Attempt any two questions.  $(2 \times 10 = 20)$

- Q.36 What are Laser. Explain Characteristic of Laser in detail.
- Q.37 What are CSSD. Explain the importance of CSSD in hospital.
- Q.38 What are Dialysis. Explain the working principle of haemodialysis machine with block diagram.

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5th Sem, **Branch :** Medical Electronics  
**Subject :** Therapeutic Medical Instrument (TMI)

**Time : 3 Hrs.**

**M.M. : 100**

#### **SECTION-A**

**Note :** Multiple choice questions. All questions are compulsory.  $(10 \times 1 = 10)$

- Q.1 For what all purposes is diathermy principle used?
- a) Surgical and Therapeutic
  - b) Therapeutic and Diagnostic
  - c) Diagnostic and surgical
  - d) Diagnostic and rehabilitative
- Q.2 Waste autoclaves process waste in
- a) Batches
  - b) Continuous flow
  - c) Both A and B
  - d) None of the above
- Q.3 The autoclave process gives a \_\_\_\_\_ pathogen and virus kill rate.
- a) High
  - b) Very high
  - c) Low
  - d) Very low
- Q.4 What is the operating temperature for table top steam sterilizer?
- a)  $110-115^{\circ}\text{C}$
  - b)  $121-130^{\circ}\text{C}$
  - c)  $121-135^{\circ}\text{C}$
  - d)  $121^{\circ}\text{C}$
- Q.5 Where is haemodialysis carried out.
- a) Home

- b) Hospital
  - c) Dialysis centre & Hospital
  - d) Dialysis centre
- Q.6** What surgical functions are performed by the diathermy machine?
- a) Cutting, coagulation, fulguration
  - b) Cutting, fulguration
  - c) Cutting, coagulation
  - d) Coagulation, fulguration
- Q.7** Which are not a common microwave application
- |                 |                             |
|-----------------|-----------------------------|
| a) Telephone    | b) Radar                    |
| c) Mobile radio | d) Satellite communications |
- Q.8** Which type of laser is used in the treatment of detached retina
- |                          |                     |
|--------------------------|---------------------|
| a) Ruby laser            | b) He-Nelaser       |
| c) CO <sub>2</sub> laser | d) Semi Solid laser |
- Q.9** Which of the diathermy machine is good for deep tissue healing?
- |                  |                       |
|------------------|-----------------------|
| a) Short wave    | b) Ultrasound         |
| c) Cold compress | d) Electrical impulse |
- Q.10** Which can be side effect of hemodialysis
- |           |                 |
|-----------|-----------------|
| a) Nausea | b) Weakness     |
| c) Cramp  | d) All of these |

### **SECTION-B**

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

**Q.11** Full form of ICU.

- Q.12 Name instruments which are used in to measure electric impulse of heart.
- Q.13 Expand TENS.
- Q.14 What are Physiotherapy
- Q.15 What are Higher Energy State.
- Q.16 What are Heat Therapy.
- Q.17 What are Fulguration.
- Q.18 What are Autoclave.
- Q.19 Expand CSSD.
- Q.20 What are Diathermy.

### **SECTION-C**

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

- Q.21 What are stimulator. Explain Magnetic stimulator.
- Q.22 What are Coagulation. Explain different types of Coagulation electrode.
- Q.23 What are ECG. Explain it.
- Q.24 What are Ultrasonic therapy. Explain Block diagram of Ultrasonic therapy unit.
- Q.25 Define Microwave diathermy. Explain the production of microwave.
- Q.26 What are Short Wave Diathermy. Explain Inductive plate method application of short wave diathermy.
- Q.27 What are Electrotherapy. Explain Faradic & Galvanic current.
- Q.28 Define therapeutic instrument. Explain Cardiac Pacemaker.