

Reg.No.:								
----------	--	--	--	--	--	--	--	--



VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN  
 [AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]  
 Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

**Question Paper Code: 12010**

**B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – MAY / JUNE 2024**

**Seventh Semester**

**Electronics and Communication Engineering**

**U19BMOE9 – ICU AND OPERATION THEATRE EQUIPMENTS**

**(Regulation 2019)**

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

**PART – A**

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	State the principle of suction apparatus.	2	K1	CO1
2.	List the types of Infusion systems.	2	K2	CO1
3.	Name the membrane presently used in artificial kidney. Justify.	2	K2	CO2
4.	State the Principle of dialysis in the artificial kidney.	2	K1	CO2
5.	Mention the primary uses of Incubator.	2	K1	CO3
6.	Differentiate normal pump and peristaltic pump.	2	K2	CO3
7.	Define humidification.	2	K1	CO4
8.	Name the different types of operating tables.	2	K2	CO4
9.	Infer the natural protective mechanisms against electricity.	2	K2	CO5
10.	List the Hazards present in operation rooms.	2	K2	CO5

**PART – B**

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11. a)	Explain the components of Automated drug delivery systems.	13	K4	CO1

(OR)

	b)	Compare and contrast the different types of sterilizers and their applications.	13	K4	CO1
12.	a)	Illustrate the working of hemodialysis machine with neat schematic diagram.	13	K2	CO2
		(OR)			
	b)	Describe in detail about different types of dialyzers.	13	K2	CO2
13.	a)	Identify the application of Heart lung machine during heart surgery.	13	K3	CO3
		(OR)			
	b)	Compare and contrast different types of oxygenators. Analyze its applications.	13	K4	CO3
14.	a)	Illustrate the advantages of surgical diathermy and different types of electro surgical techniques with neat diagram.	13	K3	CO4
		(OR)			
	b)	Explain the working of Anesthesia Equipment with block diagram.	13	K3	CO4
15.	a)	Describe the important Susceptibility Parameters involved in Electrical Safety in Hospitals.	13	K3	CO5
		(OR)			
	b)	Analyze the different types of leakage current in medical devices.	13	K3	CO5

PART – C

(1 x 15 = 15Marks)

Q.No.	Questions	Marks	KL	CO
16.	a) Anticipate the case study on Infusion pump and give the features and advantages.	15	K4	CO1
	(OR)			
	b) Indicate the Machine controls and measurements in dialyzer. Justify.	15	K4	CO2