

Lesson Plan- BMI

Name of the Faculty : Mr. Anjani Kumar (Theory) and (Practical) both
Discipline : I&C Engineering
Semester : 6th
Subject : BMI
Lesson Plan Duration : 15 weeks (From 22/03/2021 to 02/07/2021)

Work Load (Lecture /Practical) per week(in hours)P: Lectures-04 Practicals-03

Week		Theory		Practical
	Lecture Day	Topic (including assignment/test)	Practical Day	Topic
1st	1st	Introduction to Subject : BMI	1st	To measure blood pressure of a person using analog B.P. gauge
	2nd	Introduction, development of biomedical instrumentation	2nd	”
	3rd	man-instrumentation system its components	3rd	”
	4th	research and clinical instrumentation		
2nd	5th	in-vivo and in-vitro measurements	4th	To measure blood pressure of a person using digital B.P. gauge
	6th	Specifications of medical instrumentation system	5th	”
	7th	Physiology Introduction	6th	”
	8th	physiological systems of the body		
3rd	9th	cardiovascular system	7th	To study the various physiological systems of the body.
	10th	”	8th	”
	11th	respiratory system	9th	”
	12th	”		
4th	13th	nervous system	10th	To study the electrode-tissue interface and contact impedance
	14th	”	11th	”
	15th	bio-chemical system	12th	”
	16th	”		
5th	17th	Assignment/Test	13th	”
	18th	Bioelectric Signals and Electrodes	14th	”
	19th	Study of bio-electric potentials	15th	”
	20th	resting and action potentials		

6th	21st	Bio-electrodes	16th	To study the concept of EEG.
	22nd	electrode- tissue interface	17th	„
	23rd	contact impedance	18th	„
	24th	types of electrodes		
7th	25th	Topic Contd..	19th	„
	26th	Assignment/Test	20th	„
	27th	Diagnostic Instruments (Brief Study)	21st	„
	28th	Electro cardiograph(ECG)		
8th	29th	„	22nd	To study the concept of EMG
	30th	Electro encephalograph (EEG)	23rd	„
	31st	„	24th	„
	32nd	Electro myograph (EMG)		
9th	33rd	„	25th	Visit of Intensive Care Units (ICUs)of a hospital and to prepare a report.
	34th	Pacemakers	26th	„
	35th	Defibrillators	27th	„
	36th	Spirometer		
10th	37th	pulse oxymeter SPO2	28th	„
	38th	NIBP (non invasive blood pressure)	29th	„
	39th	Glucometer	30th	„
	40th	Speech audiometer		
11th	41st	Assignment/Test	31st	Measurement of blood sugar of a patient using glucometer
	42nd	Bio-telemetry Introduction	32nd	„
	43rd	Block Diagram of Bio-Telemetry Systems	33rd	„
	44th	Telemedicine		
12th	45th	Intensive Care Unit: Introduction	34th	Measurement of heart beat with ECG machine using cardio-scope / ECG machine
	46th	Elements of Intensive Care Unit (ICU)	35th	„
	47th	Introduction of Ventilators	36th	„
	48th	Computer applications:		

13th	49th	Computer applications in biomedical devices	37th	„
	50th	Topic Contd..	38th	„
	51st	Computerized Axial Tomography(CAT) scanners	39th	„
	52nd	„		
14th	53rd	„	40th	To study spirometer concepts & automation in diagnosis
	54th	Test	41st	„
	55th	Application of embedded system in Bio-medical instrumentation	42nd	„
	56th	„		
15th	57th	„	43rd	„
	58th	Revision	44th	„
	59th	Revision/Test	45th	„
	60th	Revision/Test		