

GUJARAT TECHNOLOGICAL UNIVERSITY**BE- SEMESTER-VI (NEW) EXAMINATION – WINTER 2020****Subject Code: 2160301****Date: 20/01/2021****Subject Name: Diagnostic Instrumentation****Time: 02:00 PM TO 04:00 PM****Total Marks: 56****Instructions:**

1. Attempt any **FOUR** questions out of **EIGHT** questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

MARKS

Q.1	(a) Write a Short Note on EOG.	03
	(b) Write a Short note on Phonocardiography.	04
	(c) Explain ECG Machine with necessary block Diagram.	07
Q.2	(a) Draw neat ECG wave Form and give significance of ECG.	03
	(b) Draw Neat labeled block diagram of EEG Machine.	04
	(c) Explain Basic Spirometer with necessary Diagram.	07
Q.3	(a) Give Full Form of: ERG, EEG, EMG.	03
	(b) Write a short note on Goldman Tonometry.	04
	(c) Explain Colorimeter with necessary Block Diagram.	07
Q.4	(a) Give full form of AER, ASSR, ABER.	03
	(b) Explain Pure Tone Audiometer.	04
	(c) Explain Basic Instrumentation of Flame Photometer with necessary Block Diagram.	07
Q.5	(a) Differentiate between Air Conduction & Bone Conduction.	03
	(b) Explain pO ₂ Electrode with necessary Diagram.	04
	(c) What is endoscopy? Explain different components of Endoscope in detail.	07
Q.6	(a) Explain the Beer-Lambert law with the help of diagram.	03
	(b) Write a Short note on Heart sound.	04
	(c) What is Masking in Audiometry? Describe Hearing Aid with necessary Instrumentation.	07
Q.7	(a) Write Nernst Equation & the Equation of pH calculation. And Give the pH value of Blood.	03
	(b) Explain Bruce protocol used for Treadmill Test.	04
	(c) Enlist and explain Various methods of Blood Cell Counting.	07
Q.8	(a) What is Halter Monitoring?	03
	(b) Write a short note on Thin Layer Chromatography.	04
	(c) Explain Construction of Glass Electrode and Explain pH measurement in detail.	07
