

## GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VI (NEW) EXAMINATION – WINTER 2018

Subject Code:2160301

Date:16/11/2018

Subject Name:Diagnostic Instrumentation

Time: 02:30 PM TO 05:00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	(a) Draw and brief about all segments of ECG wave.	03
	(b) Enlist and explain cardiovascular diseases.	04
	(c) Draw and explain block-diagram of ECG machine.	07
Q.2	(a) Draw and explain EEG waveform with its frequency range and amplitude.	03
	(b) Explain Holter monitoring.	04
	(c) Explain phonocardiograph with its block diagram and application.	07
	OR	
	(c) Explain basic spirometer with its clinical application.	07
Q.3	(a) Explain Electronystagmogram.	03
	(b) What is visual evoked response?	04
	(c) Explain Tonometry with its application.	07
	OR	
Q.3	(a) Explain application of ERG in medical diagnosis.	03
	(b) What is Nerve conduction velocity? Give its application.	04
	(c) Explain coulter counter method of blood cell counting.	07
Q.4	(a) Give application of Autoanalyser.	03
	(b) What is difference between SpO <sub>2</sub> and SaO <sub>2</sub> ?	04
	(c) Explain Electromyography technique with its application.	07
	OR	
Q.4	(a) Give the application of Spectrophotometer.	03
	(b) Give the application of Chromatography.	04
	(c) Explain basic endoscope system and its various types with application	07
Q.5	(a) Enlist and explain Respiratory disorders.	03
	(b) Brief about ELISA Reader.	04
	(c) Explain 10-20 method of electrode placement for EEG measurement.	07
	OR	
Q.5	(a) Give the application of Electrophoresis.	03
	(b) Give difference between coulter counter method and Pico scale.	04
	(c) Draw and explain constructional diagram of pulseoximeter.	07

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