

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER- VI(NEW) – EXAMINATION – SUMMER 2019****Subject Code: 2160301****Date: 10/05/2019****Subject Name: Diagnostic Instrumentation****Time: 10:30 AM TO 01:00 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 neat wave form of ECG and Give significance of ECG. **03**  
(b) Short note on EOG. **04**  
(c) Draw and Explain neat Block diagram of EEG Machine. **07**
- Q.2** (a) What is Halter Monitoring? Explain Bruce Protocol. **03**  
(b) Give Frequency distribution of various phases of EEG. **04**  
(c) Enlist and Explain 12 lead configuration of ECG. **07**
- OR**
- (c) Draw & Explain neat block diagram of ECG. **07**
- Q.3** (a) Enlist various types of Cardiac Disorders & Explain Myocardial Infraction. **03**  
(b) Write a short note on Phonocardiography. **04**  
(c) Explain Basic Instrumentation of Audiometer. **07**
- OR**
- Q.3** (a) Enlist Function of ELISA reader & RIA units. **03**  
(b) Describe Gold man Tonometry. **04**  
(c) Write a short note on Wedge Spirometer. **07**
- Q.4** (a) 1. State Beer Lambert's law & Give equation for it. **02**  
2. Give Normal value of blood pH. **01**  
(b) Briefly Explain Air Conduction & Bone Conduction. **04**  
(c) Enlist various types of Blood cell counting techniques & Explain Coulter Counter. **07**
- OR**
- Q.4** (a) Write full form of : HPLC, LASER, ABER. **03**  
(b) Give Classification & Application of Liquid Chromatography. **04**  
(c) Explain basic instrumentation of Colorimeter. **07**
- Q.5** (a) What is BP? Differentiate between Hypertension & Hypotension. **03**  
(b) Write a short note on: Sigmoidoscopy & Bronchoscopy. **04**  
(c) Explain Construction & working of calomel Electrode for pH measurement. **07**
- OR**
- Q.5** (a) Enlist various ophthalmological Disorders. Write a brief note on Glaucoma. **03**  
(b) Write Short note on: Colonoscopy & Laryngoscopy **04**  
(c) Describe Blood pO<sub>2</sub> measurement using Clark Electrode. **07**

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