#### SNS COLLEGE OF ALLIED HEALTH SCIENCE, COIMBATORE -35

(Affiliated to the Tamil Nadu Dr M.G.R Medical University, Chennai) **B.Sc. CARDIAC TECHNOLOGY-I-YEAR** 



### **PAPER-III**

SUNJECT CODE & NAME-801510-MEDICAL ELECTRONICS, BIOPHYSICS AND COMPUTER USAGE RELEVANT TO CARDIAC TECHNOLOGY AND BASIC ELECTROCARDIOGRAPHY

UNIT -III -TOPIC- THE NORMAL ELECTROCARDIOGRAM ATRIAL ACTIVATION
THE NORMAL P WAVE ATRIAL REPOLARIZATION ATRIOVENTRICULAR NODE
CONDUCTION AND THE PR SEGMENT VENTRICULAR ACTIVATION AND THE QRS
COMPLEX VENTRICULAR RECOVERY AND ST-T WAVE U WAVE NORMAL
VARIANTS RATE AND RHYTHM

REFERENCE - THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY QUESTION PAPER

| S. No. | Question/Topic                 | Month &          | Bloom's Taxonomy Level |  |
|--------|--------------------------------|------------------|------------------------|--|
|        |                                | Year             |                        |  |
| 1      | Explain ECG Lead system.       |                  |                        |  |
| 2      | Explain in detail the ECG lead | Aug 2018 Analyze |                        |  |
|        | system.                        | 114g 2010        | Tilidiy 2C             |  |
| 3      | Discuss on 12 lead ECG system. | Feb 2019         | Analyze                |  |

## 5 marks

| S. No. | Question/Topic                       | Month & Year  | Bloom's Taxonomy<br>Level |
|--------|--------------------------------------|---------------|---------------------------|
| _      | Draw normal ECG waveform by          |               |                           |
| 1      | mentioning segments, interval and    | Aug 2017      | Apply/Understand          |
|        | time duration of each wave.          |               |                           |
| 2      | Normal P wave.                       | Feb 2017, Aug | Understand                |
|        |                                      | 2018          |                           |
|        | What are ionic currents and discuss  |               |                           |
| 3      | on the phases of cardiac action      | Feb 2019      | Understand                |
|        | potential?                           |               |                           |
| 4      | Phases of cardiac action potential.  | Feb 2020      | Understand                |
| 5      | How to calculate heart rate in sinus | Aug 2010      | Apply                     |
|        | rhythm and atrial fibrillation?      | Aug 2019      | Apply                     |
| 6      | What are the various cardiac and     | Feb 2020      | Understand                |
|        | non cardiac factors influencing ECG  | 1.60 2020     | Unucistanu                |

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| recording? (Relates to Normal |  |
|-------------------------------|--|
| Variants)                     |  |

# 3 marks

| S.  | Question/Topic                       | Month & Year        | Bloom's Taxonomy    |
|-----|--------------------------------------|---------------------|---------------------|
| No. |                                      |                     | Level               |
| 1   | Write notes on Depolarization and    | Aug 2015            | Understand          |
|     | Re polarization.                     |                     |                     |
| 2   | What is Depolarization and           | Feb 2018            | Remember/Understand |
|     | Repolarisation?                      |                     |                     |
| 3   | Depolarisation and repolarization.   | Aug 2018            | Understand          |
| 4   | Write about Action Potential / What  | Aug 2015, Feb 2016, | Remember            |
|     | is action potential? / Action        | Aug 2016, Aug 2018  |                     |
|     | potentials.                          |                     |                     |
| 5   | What are the leads showing P-wave    | Feb 2016            | Remember            |
|     | well? What is the normal duration    |                     |                     |
|     | of P-Wave?                           |                     |                     |
| 6   | What are the characteristics of      | Aug 2017            | Remember            |
|     | normal P Wave?                       |                     |                     |
| 7   | Electrode used to detect P wave and  | Aug 2018            | Remember            |
|     | the time duration of P-wave.         |                     |                     |
| 8   | U wave.                              | Aug 2019            | Remember            |
| 9   | Factors determining the amplitude    | Aug 2019            | Understand          |
|     | of QRS complex.                      |                     |                     |
| 10  | How do you calculate PR interval?    | Aug 2019            | Apply               |
| 11  | Calibration check in ECG Calibration | Aug 2019, Feb 2020  | Remember            |
|     | check in electrocardiography.        |                     |                     |
| 12  | ECG waveform.                        | Feb 2020            | Remember            |
| 13  | ECG pattern in atrial fibrillation.  | Feb 2020            | Remember/Understand |
|     | (Relates to Rhythm)                  |                     |                     |
| 14  | Calculate the Heart rate for the     | Aug 2015, Feb 2016, | Apply               |
|     | given Parameter.                     | Aug 2016, Feb 2017, |                     |
|     |                                      | Feb 2019, Aug 2018, |                     |
|     |                                      | Feb 2020            |                     |