(AUTONOMOUS)
BSc DEGREE EXAMINATION DECEMBER 2017
(Fourth Semester)

Branch - **ELECTRONICS**

MEDICAL ELECTRONICS

Time : Three Hours   Maximum : 75 Marks

SECTION-A (20 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks ($10 \times 2 = 20$)

1   What is called tissues?
2   Write the Goldman's equation for resting potential.
3   Define magnetic component.
4   What is meant by unknown frequency?
5   Write any two types of blood pressure measurement.
6   Draw the block diagram of an average heart rate monitor.
7   Draw the Brain waves.
8   Define pacemaker.
9   Define audiometer.
10   Write any two applications of X-ray examination.

SECTION - B (25 Marks!
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks **($5 \times 5 = 25$)**

11 a Explain the cell and their structure.
                          OR
    b Explain the half cell potential with surface electrode equivalent circuit.

12 a Explain the operation of electric component.
                          OR
    b Write a short note about the path of least resistance.

13 a Write a short note on indirect measurement of blood pressure.
                          OR
    b How do you measure the blood flow using ultrasonic blood flow meter?

14 a What is meant by bio potential recorders? Explain the characteristics of
        recording system.
                          OR
    b Define diathermy and explain about surgical diathermy.

15 a Explain the function of Angiography.
                          OR
    b Write a short note about basic audiometer.

SECTION - C (30 Marks!
Answer any **THREE** Questions
ALL Questions Carry **EQUAL** Marks ($3 \times 10 = 30$)

16   Explain the function about active transducers.
17   What is meant by filter? Explain the types of fiters.
18   Explain plethysmography.
19   Briefly explain the function about external defibrillator.
20   Draw the block diagram and explains the function of computer axial tomography

Z-Z-Z   END