

**PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)**

**BSc DEGREE EXAMINATION JUNE 2014
(Sixth Semester)**

Branch – ELECTRONICS

MEDICAL ELECTRONICS

Time : Three Hours

Maximum : 75 Marks

SECTION-A (20 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks

(10 x 2 = 20)

- 1 Define Transducer.
- 2 What is half cell potential?
- 3 Write two points on electric component of interference.
- 4 Define filter.
- 5 What are the components of high blood pressure?
- 6 Define heart sound.
- 7 Expand EMG.
- 8 Write two uses of diathermy.
- 9 Write the evolution of X-ray.
- 10 Expand CAT.

SECTION - B (25 Marks)

Answer **ALL** Questions

ALL Questions Carry **EQUAL** Marks (5 x 5 = 25)

- 11 a Explain about the activity of transducers.
OR
- b Define the various types of electrode models.
- 12 a Explain the lead as a path of least resistance.
OR
- b Write a note on Line noise.
- 13 a Explain the measurement of blood flow and process involve in it.
OR
- b What is respiration rate and how it can be measured?
- 14 a Write short note on EEG.
OR
- b Explain the surgical diathermy process.
- 15 a Explain the echocardiography and its working.
OR
- b Write short note on Audiometer.

SECTION - C (30 Marks)

Answer any **THREE** Questions

ALL Questions Carry **EQUAL** Marks (3 x 10 = 30)

- 16 Explain briefly about the electrical activity of cells, tissues and muscles.
- 17 Describe in detail about how to minimize the interference?
- 18 Define the blood flow measurement and its effect in cardiac output.
- 19 Explain the operation of pacemaker with neat diagram.
- 20 What is X-ray unit and explain its working?

Z-Z-Z

END