

STELLA MARIS COLLEGE (AUTONOMOUS) CHENNAI – 600 086.
(For candidates admitted during the academic year 2008-09 & thereafter)

SUBJECT CODE : PH/ME/BM54
B.Sc. DEGREE EXAMINATION NOVEMBER 2011
BRANCH III - PHYSICS
FIFTH SEMESTER

COURSE : MAJOR – ELECTIVE
PAPER : BIOMEDICAL PHYSICS
TIME : 3 HOURS

MAX. MARKS : 100

SECTION - A

ANSWER ALL QUESTIONS:

(10x3=30)

1. Distinguish Angiography and mammography.
2. Write short note about fluorescence.
3. What is piezoelectric effect?
4. What is Doppler Effect? Mention its uses in medicine.
5. Briefly explain action potential and resting potential.
6. Write short note on EMG.
7. What is DNA? Mention its importance.
8. What are radioisotopes? Give examples.
9. Write the principle of pulse oximetry.
10. What is transducer?

SECTION – B

ANSWER ANY FIVE QUESTIONS:

(5X6=30)

11. With a block diagram explain the working of computed tomography.
12. Explain the different modes of ultrasound used in medicine.
13. With a neat diagram explain the components of stethoscope.
14. Draw a typical ECG wave (P – QRS - T wave) and explain.
15. What are brain waves? Mention its types and significance.
16. Explain the interaction of Gamma rays with matter.
17. Explain the theory of gas flow in the air way system

SECTION – C

ANSWER ANY TWO QUESTIONS:

(2X20=40)

18. With a neat diagram explain how X- rays are produced. Discuss the types of X – rays.
19. Explain CEU and its two forms. Mention its advantages and disadvantages.
20. Explain in detail how radiation is used as diagnostic and therapeutic tool in medicine.
21. What is meant by blood pressure? Describe in detail the method to measure blood pressure.
