

EASTERN UNIVERSITY, SRI LANKA
THIRD YEAR FIRST SEMESTER EXAMINATION IN SCIENCE -
2021/2022
(Sep/Oct - 2024)
PH 3042 MEDICAL PHYSICS

Time : 01 hour

Answer All Questions

1.
 - (a) Briefly explain the terms 'Excitation' and 'Ionization' by radiation.
(30marks)
 - (b) What types of radiation can cause damage to living cells?
(25marks)
 - (c) Explain the direct and indirect effect by radiation in humans
(25marks)
 - (d) What are the four types of damages in DNA by the radiation effect?
(20marks)

2.

(a) Explain the working principle of a Computed Tomography (CT) Scanner. (20marks)

(b) Briefly describe following things involve in CT scanning,

(i) The effective radiation dose in CT scanning

(ii) Application of the imaging

(iii) Time taken for the scan

(iv) Effect on the body

(v) Picture details of soft tissue and bony structure

(25marks)

(c) What is meant by a pacemaker?

(10marks)

(d) Describe the function of unipolar and bipolar pacemakers.

(30marks)

(e) Explain about the temporary pacing and permanent pacing of a pacemaker. (15marks)
