Reg. No. | | | | | | | | | |

ZOS 555

Fourth Semester M.Sc. Examination, September/October 2022
(CBCS)
ZOOLOGY
Radiation Biology

Time : 3 Hours Max. Marks : 70

Instructions *: 1) Answer* ***all*** *questions.*
2) Give illustrations ***wherever*** *necessary.*

I. Write short notes on : **(5×2=10)**

a) Pair production.

b) GM counter.

c) Radiolysis of water.

d) Radioactive disposal.

e) Radiation hormesis.

II. a) Discuss the modes of interaction of X- rays with matter. Add a note on applications of X- rays. **12**

OR

b) Explain the types and sources of ionizing radiations. Add a note on radiation doses and units.

III. a) Explain the principle of radiation dosimetry. Add a note on physical dosimeters. **12**

OR

Write notes on :

b) Frick dosimetry

c) High and low dose indicator.

P.T.O.

IV. a) Discuss the effects of radiation on nucleic acids, proteins and carbohydrates. **12**

OR

b) Describe the different types of chromosomal damages induced by radiation.

V. a) Elaborate on radiation induced external and internal hazards and their evaluation. **12**

OR

b) Give an account of radiation protection measures in radioisotope laboratories. Add a note on Maximal Permissible Dose (MPD).

VI. a) Write an account on radioimmunoassay and its applications. **12**

OR

b) Discuss on the applications of radioisotopes in agriculture, plant breeding and in medicine.
