

**TDC Odd Semester Exam., 2020
held in July, 2021**

ZOOLOGY

(Honours)

(5th Semester)

Course No. : ZOOH-502

**(Human and Population Genetics, Radiation
Biology and Animal Behaviour)**

Full Marks : 35

Pass Marks : 12

Time : 2 hours

*The figures in the margin indicate full marks
for the questions*

Answer **five** questions, taking **one** from each Unit

UNIT—I

1. (a) What is karyotype? 1
(b) What is autosomal aberration? 2
(c) Explain different types of autosomal aberrations in man. 4

10-21/844

(Turn Over)

2. (a) What is Turner syndrome? 1
(b) What is amniocentesis? 2
(c) What is DNA fingerprinting? What is its utility? 2+2=4

UNIT—II

3. (a) What do you mean by population genetics? 1
(b) What is Hardy-Weinberg equilibrium? 2
(c) Discuss genetical basis of ABO system of blood group in humans. 4
4. (a) What is eugenics? 1
(b) What is the difference between eugenics and euthenics? 2
(c) Discuss briefly about negative and positive eugenics. 4

UNIT—III

5. (a) Define radiation. 1
(b) Mention various units of measurement of radiation. 2
(c) Write about different types of radiation. 4

10-21/844

(Continued)

(3)

6. (a) What is radioactivity? 1
(b) What are the sources of radioactive radiation? 2
(c) Explain the effect of radioactive radiation in humans and other organisms. 4

UNIT—IV

7. (a) What is ionizing radiation? 1
(b) What is the difference between ionizing radiation and non-ionizing radiation? 2
(c) Discuss the biological effects of ionizing radiation. 4
8. (a) What are radioactive isotopes? 1
(b) What is half-life? 2
(c) Discuss the usefulness of radioisotopes as tracers and in medical diagnosis. 2+2=4

UNIT—V

9. (a) What are taxes? 1
(b) What is reflex behaviour? 2
(c) What is reflex action? State the characteristics of reflex behaviour. 2+2=4

(4)

10. (a) What is the difference between instinctive behaviour and learning behaviour? 2
(b) What do you mean by positive tropism and negative tropism? 1
(c) Explain different types of learning behaviour in animals. 4
