

C 80755

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Name.....

Reg. No.....

FOURTH SEMESTER M.Sc. DEGREE EXAMINATION, MARCH 2020

(CUCSS)

Zoology

ZO4 ET 12—HUMAN GENETICS—III : CANCER GENETICS AND GENETIC SERVICES

Time : Three Hours

Maximum : 36 Weightage

Part A

I. Write short notes on all the *fourteen* questions. Each question carries 1 weightage :

- 1 Caspases.
- 2 Retinoblastoma.
- 3 Burkitt lymphoma.
- 4 Telangiectasia.
- 5 Population screening for genetic diseases.
- 6 Genomic library.
- 7 LOD score.
- 8 PND techniques Act.
- 9 SCID.
- 10 Radiation dosimetry.
- 11 Dizygotic twins.
- 12 Inbreeding.
- 13 Linkage disequilibrium.
- 14 Multiple myeloma.

(14 × 1 = 14 weightage)

Part B

II. Answer any *seven* of the following. Each question carries 2 weightage :

- 15 Give an account on analytic epidemiology.
- 16 Give an account of dermatoglyphics and genetic aberrations.

Turn over

- 17 Give an account on the clinical applications of radiation biology.
- 18 Illustrate the genetics of ABO blood group.
- 19 Give an insight into the ethical issues of *in vitro* fertilization.
- 20 Explain the principle and procedure of chromosome walking.
- 21 Write the principle, methodology and applications of SDS-PAGE.
- 22 Give an account on DNA repair genes and its role in cancer.
- 23 Give an account on different types of cancers of reticulo-endothelial system.
- 24 Discuss the importance of pre-marital genetic counselling.

(7 × 2 = 14 weightage)

Part C

III. Answer any *two* of the following. Each question carries 4 weightage :

- 25 Give detailed account on DNA damaging agents that cause genomic instability and their mode of action
- 26 Explain the various types and genetics of solid tumors.
- 27 Discuss the psychological aspects of genetic counselling.
- 28 Describe the basic steps involved in genetic engineering. Add a note on types of vectors used in genetic engineering.

(2 × 4 = 8 weightage)