

C 60089

(Pages : 2)

Name.....

Reg. No.....

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH 2019

(CUCBCSS)

Zoology

ZOL 6B 15 (EI)—HUMAN GENETICS

Time : Three Hours

Maximum : 80 Marks

A. Answer all questions (1 mark each) :

- 1 The individual variation in the response to the drugs is dealt in _____.
- 2 Who will assist in identifying the risk of genetic disposition in a family ?
- 3 Duchenne muscular dystrophy is caused by the mutation of the gene _____.
- 4 The reciprocal translocation of genetic material between chromosome 9 and chromosome 22 results in _____ chromosome.
- 5 In R banding technique 'R' stands for _____.
- 6 Who developed 'in born errors of metabolism' ?
- 7 Give one example for sex chromosomal dominant gene mutation disorder.
- 8 What is the full form of SCID ?
- 9 Write the alphabetical symbol for short arm of chromosome.
- 10 Addition of large arm of 14th chromosome (14q⁺) results in _____ syndrome.

(10 × 1 = 10 marks)

B. Answer any ten questions (Each question carries 2 marks) :

- 11 Write short notes on test tube babies.
- 12 Give short notes on foetoscopy.
- 13 What are isochromosomes ?
- 14 Write short notes on Prader willi syndrome.
- 15 Write short notes on sex reversal.
- 16 What is apoptosis ?

Turn over

- 17 Write short notes on amniocentesis.
- 18 What is ecogenetics ?
- 19 What is G-banding ? Mention its application.
- 20 Write notes on Fluorescent in-situ hybridization.
- 21 Write notes on Marfan's syndrome
- 22 Write short notes on retinoblastoma.

(10 × 2 = 20 marks)

C. Answer any *five* questions (Each question carries 6 marks) :

- 23 Explain any *three* techniques used for prenatal diagnosis.
- 24 Write short essay on genomic imprinting.
- 25 Give an account on genetics of embryonic development.
- 26 Give an account on any three disorders associated with the structural modifications of human chromosomes.
- 27 Write the sign, symptoms and genetics of any three X- linked diseases.
- 28 Give a detailed account on mitotic and meiotic non-disjunction.
- 29 What is pedigree analysis ? With suitable example show how a pedigree chart is constructed.
- 30 What is thalassemia ? Give an account on causes, symptoms, types and diagnosis of thalassemia.

(5 × 6 = 30 marks)

D. Answer any *two* questions (Each question carries 10 marks) :

- 31 What is genetic counseling ? Explain the major steps of directive and non-directive counseling. Also, make a comparative analysis of directive non- directive counseling.
- 32 What is multifactorial inheritance ? Give a detailed account on any four diseases associated with multifactorial inheritance.
- 33 Discuss autosomal dominant inheritance by citing any four diseases / disorders usually found in humans.
- 34 Narrate the history and nomenclature of human chromosomes. Discuss the outputs of various conferences held in connection with the chromosomes.

(2 × 10 = 20 marks)