

D 40082

(Pages : 2)

Name.....

Reg. No.....

SIXTH SEMESTER B.Sc. DEGREE EXAMINATION, MARCH/APRIL 2018

(CUCBCSS—UG)

Zoology

ZOL 6B 15 (E1)—HUMAN GENETICS

Time : Three Hours

Maximum : 80 Marks

(A) Answer *all* questions (1 mark each) :

- 1 A non-hereditary variation in phenotype caused by environmental conditions is called _____.
- 2 A child that is conceived outside the woman's body is called _____.
- 3 Duchenne muscular dystrophy is caused by the mutation in the gene dystrophin, located on the human _____ chromosome.
- 4 The fusion gene for hybrid protein tyrosine signaling protein is characteristic of _____ chromosome.
- 5 In G banding, 'G' stands for _____.
- 6 The inheritance of SRY and TDF provides examples of _____ linked inheritance.
- 7 Give one example for autosomal recessive gene mutation disorder.
- 8 Deletion of 5th chromosome (5p-) results in _____ syndrome.
- 9 ASD is an example of _____ inheritance.
- 10 Programmed cell death is also known as _____.

(10 × 1 = 10 marks)

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

- 11 Write short notes on psychodynamics of genetic counseling.
- 12 State the importance of twin studies.
- 13 Write short notes on sex reversal.
- 14 What are isochromosomes ?
- 15 Write the chromosomal anomaly and symptoms of cri-chat syndrome.
- 16 Write short notes on Alzheimer's disease.

Turn over

- 17 Write short notes on Albright's hereditary osteodystrophy.
- 18 Write short notes on the genetics of retinoblastoma.
- 19 Write notes on brittle bone disease.
- 20 What are the main resolutions of Chicago conference on chromosomes ?
- 21 Draw any four symbols used in pedigree construction.
- 22 Write notes on hereditary hemolytic anemia.

(10 × 2 = 20 marks)

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

- 23 Explain Denver system of classification of chromosome, with special reference to human karyotype.
- 24 Give detailed account on symptoms, types and inheritance of Huntington's chorea.
- 25 Write the sign, symptoms and inheritance of Ehler's-Danlos syndrome.
- 26 Give an account on congenital heart diseases.
- 27 Give detailed account on Martin bell syndrome.
- 28 Discuss the various steps involved in directive counseling. Mention the merits and demerits.
- 29 Briefly describe the genetics of development.
- 30 Explain any *two* disorders associated with X-linked recessive inheritance.

(5 × 6 = 30 marks)

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

- 31 Describe characteristics of human chromosomes and explain the various banding techniques employed for study of human chromosomes.
- 32 Explain autosomal recessive inheritance. Describe the sign, symptoms and the genetics of any *four* autosomal recessive diseases / syndromes.
- 33 What is prenatal diagnosis ? Explain the various techniques employed, with merits and demerits, for prenatal diagnosis.
- 34 Write an essay on pharmacogenetics.

(2 × 10 = 20 marks)