

Model Question Paper
Zoology-Modern Genetics - Part I

12th Standard

Biology

Reg.No. :

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I. Answer all the questions.

II. Use Blue pen only.

Time : 01:00:00 Hrs

Total Marks : 75

5 x 1 = 5

Section-A

- 1) In which prokaryote has voluminous genetical works been made
(a) TMV virus (b) Phage (c) Escherichia coli (d) coliform bacteria
- 2) Who discovered the double helix DNA model ?
(a) H.G. Khorana (b) Mendel (c) T.H. Morgan (d) Watson and Crick
- 3) About how many hereditary diseases in human beings had been identified ?
(a) more than 300 (b) less than 300 (c) about 400 (d) about 100
- 4) Which of the following methods help in obtaining of information about genetic characters in man ?
(a) Biochemical test (b) Hybridization (c) Pedigree analysis (d) Inbreeding
- 5) Sickle cell anaemia is due to
(a) autosomal gene (b) sex chromosomal gene (c) vitamin deficiency (d) hormone imbalance

Section-B

- 6) What is pedigree analysis ?
- 7) What are the clinical manifestations of thalassemia?
- 8) Mention any two uses of karyotyping
- 9) What is foreign DNA in genetic engineering?
- 10) What are cloning vectors?

5 x 3 = 15

Section-C

- 11) Give an account of albinism and SCID.
- 12) What are the seven groups in human chromosome karyotyping? Mention their respective chromosomes?
- 13) What are the uses of recombinant DNA technology
- 14) Mention the ethical problems of cloning.

4 x 5 = 20

Section-D

- 15) Write an essay on DNA recombinant technology
- 16) Illustrate with example the cloning mechanism.
- 17) Give an account of human genome project.

3 x 10 = 30
