

(6 pages)

Reg. No. :

**Code No. : 30701 E Sub. Code : JMZO 41/
SMZO 41**

B.Sc. (CBCS) DEGREE EXAMINATION, APRIL 2021.

Fourth Semester

Zoology — Main

GENETICS

(For those who joined in July 2016 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer.

1. F factor contains

- | | |
|-----------|----------------------|
| (a) DNA | (b) RNA |
| (c) haRNA | (d) Both (a) and (b) |

2. The ratio of back cross
- (a) 3 : 1 (b) 1 : 1
- (c) 1 : 2 : 1 (d) 2 : 1
3. The crossing over occur at the stage of
- (a) Leptotene (b) Pachytene
- (c) Diplotene (d) 'S' phase
4. The superiority of the hybrid over the parents is called as
- (a) Test cross (b) Back cross
- (c) Heterosis (d) Crossing over
5. The term mutation, was used first by
- (a) Mendel
- (b) Hugo-de-vries
- (c) Bateson
- (d) Darwin

6. The type of mutation in which changes occur in the entire gene is called
- (a) Multiple mutation
 - (b) Gametic mutation
 - (c) Somatic mutation
 - (d) Point mutation
7. Gene refers to the portion of
- (a) DNA
 - (b) Amino acids
 - (c) Fatty acids
 - (d) None
8. The father of Human genetics
- (a) Mendel
 - (b) Garrod
 - (c) Bateson
 - (d) Darwin
9. Study on the importance of Human race is called
- (a) Genetics
 - (b) eugenics
 - (c) Euthenics
 - (d) Pedicree

10. A disease due to molecular is

- (a) Hemophilic
- (b) Color blindness
- (c) Down syndrome
- (d) Sickle cell anaemia

PART B — ($5 \times 5 = 25$ marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Comment on Mendel's laws of heredity.

Or

(b) Write about Rh factors in man.

12. (a) Mention the types of crossing over.

Or

(b) Discuss about Haemophilic.

13. (a) Describe about Mutagens.

Or

(b) Explain Down's Syndrome.

14. (a) Comment on Euthenics.

Or

- (b) Write about Phenyl-ketonuria.

15. (a) Describe the structure of virus.

Or

- (b) Give the applications of Bacteria.

PART C — ($5 \times 8 = 40$ marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Describe Mendel's dihybrid cross.

Or

- (b) Write about Interaction of genes.

17. (a) Write an essay on Sex-determination in Man.

Or

- (b) Comment on Heterosis.

18. (a) Explain the various types of Mutations with examples.

Or

- (b) Discuss about the autosomes and sex chromosomes.

19. (a) Write about ethenics.

Or

- (b) Explain about twins.

20. (a) Write an essay on Bacterial genetics.

Or

- (b) Discuss the structure, life history of bacteriophages.
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