



Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University under Category 'A' by MHRD, Estd. u/s 3 of UGC Act 1956)
Re-accredited with 'A+' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Bachelor's Degree Examination – July 2020
IV Semester

Class : II UG
Major : Zoology

Time : 3 Hours
Max. Marks: 100

18BZOC10 Genetics

Part –A

Choose the Correct Answer

10×1= 10

- Cross between heterozygous F1 hybrid and the double recessive homozygous called
 - Crossing over
 - Test cross
 - Dihybrid cross
 - Reciprocal cross
- Dihybrid ratio is
 - 3:3:1:1
 - 9:3:9:3
 - 9:3:3:1
 - 1:1:1:1
- The gene that suppresses the expression of other gene is known as
 - Inhibiting gene
 - Complementary gene
 - Lethal gene
 - Recessive gene
- Female zygotes of drosophila is
 - XY
 - XO
 - X
 - XX
- The paired chromosomes are known as
 - Bivalent
 - Monovalent
 - Polyvalent
 - Trivalent
- Copy choice theory was suggested by
 - Lederberg
 - Belling
 - Darlington
 - Stern and Hotta
- Sickle cell anemia is a
 - Autosomal recessive
 - X-linked recessive
 - Rare X-linked recessive
 - none
- The ratio between long and short arm of chromosomes is
 - 1:3
 - 2:1
 - 3:1
 - 1:1
- Aberration in number 5 chromosome leads to
 - Down's syndrome
 - Turner's syndrome
 - Cat cry syndrome
 - Klinefelter's syndrome
- Genotype of the progeny predicted by
 - Karyotyping
 - DNA probes
 - Pedigree analysis
 - Amniocentesis

Part B

5 x 6 = 30

Answer ALL questions

Each answer should not exceed 400 words or two pages

11. a. Give an account on test cross.
(Or)
11. b. Describe Mendel's fourth postulate.
12. a. Explain about epistasis.
(Or)
12. b. Write about Rh factor.
13. a. Explain the factors affecting crossing over.
(Or)
13. b. Classify the types of linkages in *Drosophila*.
14. a. Discuss the types of sex-linked genes.
(Or)
14. b. Describe single gene effect.
15. a. Discuss Pedigree analysis.
(Or)
15. b. Mention the general effects of inbreeding and outbreeding.

Part C

5 x 12 = 60

Answer ALL questions

Each answer should not exceed 800 words or four pages

16. a. Explain about incomplete dominance.
(Or)
16. b. Discuss monohybrid cross with suitable examples.
17. a. Report on lethal genes and cumulative genes.
(Or)
17. b. Write an essay on ABO blood groups.
18. a. Explain crossing over, types and mechanism crossing over.
(Or)
18. b. Write a brief note on chromosome mapping.
19. a. Explain X-linked inheritance of recessive genes in humans.
(Or)
19. b. Elaborate chromosomal mechanisms of sex determination.
20. a. List out the chromosomal abnormalities in human.
(Or)
20. b. Write an essay on genetic counseling.
