



K22U 2344

Reg. No. :

Name :

V Semester B.Sc. Degree (CBCSS – OBE – Regular/Supplementary/
Improvement) Examination, November 2022
(2019 Admission Onwards)
CORE COURSE IN ZOOLOGY
5B08 ZLG : Genetics

Time : 3 Hours

Max. Marks : 40

Instruction : Give illustrations and figures wherever necessary.

I. Essay questions (**Each** question carries 8 marks). Answer **any two**.

- 1) What is Polygenic inheritance ? Explain the inheritance of Skin colour in man.
- 2) Explain chromosomal mechanism of Sex determination found in animals.
- 3) What is crossing over ? What are the factors affecting it ? Write its significance.
- 4) Explain the genetics of ABO blood group system in man.

II. Short essay questions (**Each** question carries 4 marks). Answer **any two**.

- 5) Explain the pattern of inheritance of shell coiling in Limnaea.
- 6) What are the characteristics of Autosomal dominant inheritance ? Give examples.
- 7) Explain sex linked inheritance in man with a suitable example.

III. Short answer questions (**Each** question carries 2 marks). Answer **any six**.

- 8) What are Lethal genes ? Give example.
- 9) Write note on Gynandromorphs.
- 10) Explain Mutation theory.
- 11) Write the salient features of multifactorial inheritance giving examples.

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- 12) Explain induced mutations.
- 13) What are complementary genes ? Give example.
- 14) What is cystic fibrosis ? What are the symptoms associated with it ?
- 15) Explain Holandric genes.

IV. Multiple choice questions (**Each** question carries 0.5 marks). Answer **all**.

- 16) A hereditary disease which is never passed from father to son is
 - a) Y-chromosomal linked disease
 - b) X-chromosomal linked disease
 - c) Autosomal linked disease
 - d) None of these
- 17) Which one of the following shows recessive epistasis ?
 - a) Coat colour in mice
 - b) Flower colour in Sweet pea
 - c) Alkaptonuria
 - d) Human skin colour
- 18) Chromosome theory of inheritance was proposed by
 - a) Sutton and Boveri
 - b) Watson and Crick
 - c) Jacob and Monod
 - d) Hershey and Chase
- 19) Which one is a sex linked disorder ?
 - a) Colour blindness
 - b) Thalassemia
 - c) Alkaptonuria
 - d) Cystic fibrosis
- 20) Sex chromosome complement of Klinefelter's syndrome is
 - a) XXY
 - b) XO
 - c) XYY
 - d) XY
- 21) The genetic disorder Achondroplasia is
 - a) Autosomal recessive
 - b) Autosomal dominant
 - c) Sex linked dominant
 - d) Sex linked recessive
- 22) Patau's syndrome occurs due to
 - a) 13th trisomy
 - b) 18th trisomy
 - c) 21st trisomy
 - d) 13th monosomy
- 23) A child of blood group O can not have parents of blood groups
 - a) A and A
 - b) AB and O
 - c) A and B
 - d) B and B