

**B.Sc-I General Science Semester-II Examination,
ZOOLOGY**

Cell Biology, Evolutionary Biology (BZT-201)

Question Bank

Q.1. Answer in one sentence / Define following terms

- 1) Who discovered the Nucleus?
- 2) What is hot dilute soup?
- 3) Define Heterochromatin.
- 4) What is survival of fittest?
- 5) What are the types of Endoplasmic Reticulum.
- 6) What is Reproductive isolation.
- 7) Who described the Cell theory.
- 8) Define intraspecific.
- 9) What is F1 particle?
- 10) Who discovered cell theory?
- 11) What is reducing atmosphere?
- 12) Who performed the chemical theory of evolution?
- 13) Define Euchromatin.
- 14) What is dating of fossils?
- 15) What is genetic drift?
- 16) What is half life period?
- 17) Define interspecific.
- 18) How many types of protein are present in Plasma membrane?
- 19) Define autophagy.
- 20) Define heterophagy.
- 21) What is autolysis?

- 22) What is the other name for the theory of use and disuse for organic evolution?
- 23) What are igneous rocks?
- 24) What are sedimentary rocks?
- 25) Which is the rock type, where fossils may be found?

Q.2. Long questions

- 1) Describe structure and functions of Golgi complex.
- 2) Describe polymorphic nature of Lysosome.
- 3) Describe different types of fossils.
- 4) Give an account on the chromosome with reference to typical structure and functions of chromosomes.
- 5) Describe in detail chemical evolution theory.
- 6) Describe in detail structure and function of Endoplasmic reticulum.
- 7) Describe in detail Fluid mosaic model.
- 8) Describe in detail ultrastructure of nucleus. And add note on nuclear pore complex.
- 9) Describe in detail different types of fossils.
- 10) What do you mean by dating of a fossil? Write in brief the carbon dating method.
- 11) Describe structure of Mitochondria.
- 12) Describe in detail sex chromosomal abnormality.
- 13) Describe in detail autosomal abnormality.
- 14) Describe Miller Urey experiment.
- 15) Describe functions of plasma membrane.

Q.3. Short note

- 1) Cell size

- 2) Miller's experiment
- 3) Functions of lysosome
- 4) Types of chromosomes
- 5) Patau syndrome
- 6) Functions of Endoplasmic reticulum
- 7) Uranium lead method
- 8) Functions of mitochondria
- 9) Mould and cast
- 10) Edward syndrome
- 11) Down syndrome
- 12) Darwin's theory of natural selection
- 13) Nuclear pore
- 14) Miller's experiment
- 15) Polytene chromosomes
- 16) Carbonization
- 17) Turner's syndrome
- 18) Why it is said that the fossil record is incomplete?
- 19) Lamarckism theory
- 20) Role of mass extinction in evolution
- 21) Major steps of chemical evolution.
- 22) Rubidium Strontium method.
- 23) Petrified fossils.
- 24) Hugo de Vries theory.
- 25) Chromatin
- 26) Nucleosomes
- 27) Nucleolus.
- 28) Symptoms of Down's syndrome.

29) Cell shape.

30) Klinefelter syndrome

B.Sc. I General Science Semester II, Examination
Subject: Zoology
Paper IV (BZT 202: Genetics)

Question Bank

Q.1: Define following Terms/ Answer in One Sentence

- 1) Define Gene Interaction
- 2) What is Crossing Over?
- 3) What is Punnet Square?
- 4) Define Alleles
- 5) What is Test Cross?
- 6) Define Mutation
- 7) What is Genotype?
- 8) Define Coupling
- 9) What is recessive character?
- 10) What is the Phenotypic monohybrid ratio?
- 11) Which blood group is universal recipient?
- 12) Who is firstly discovered linkage in Drosophila?
- 13) What is Barr body?
- 14) What is mechanism of sex determination in Drosophila and human?
- 15) What is Characteristics of Colour blindness?
- 16) What is Characteristics of Haemophilia?
- 17) How to represent Turner syndrome?
- 18) How to represent Klinefelter syndrome?
- 19) Which chromosome number changes in Down syndrome?
- 20) Which chromosome number changes in Patau syndrome?
- 21) Which chromosome number changes in Edward syndrome?
- 22) What is deletion?
- 23) What is inversion?
- 24) What is translocation?
- 25) Which type of sex determination in Drosophila?
- 26) Which type of sex determination in honey bee?
- 27) Which type of sex determination in grasshopper?
- 28) What is pairing?

- 29) What is linkage?
- 30) What is multiple allele?
- 31) Define Supplementary Gene
- 32) Define Complementary Gene?
- 33) What is codominance?
- 34) Define incomplete dominance
- 35) What is the ratio of Complementary Gene Interaction?
- 36) Which plant used for Genetic Study by Mendel?
- 37) What is heredity?
- 38) What is polyploidy?
- 39) What is Monosomy?
- 40) What is Trisomy?
- 41) Which is Genetically linked diseases?
- 42) Define Aneuploidy.
- 43) Define Euploidy
- 44) In which animal complete linkage is found?

Q. 2: Long Question

- 1) What is linkage and describe the types of linkages with suitable example?
- 2) What is Multiple Allele? Explain Multiple Alleles w.r.t ABO blood group system.
- 3) Define interaction of genes and explain it with reference to complementary factors.
- 4) What is Gene Interaction? Explain the Complementary Gene interaction.
- 5) What is Crossing over? Explain Mechanism of Crossing over.
- 6) What is mutation? Describe the types of mutation due to change in structure of chromosome?
- 7) Give an account on law of dominance with suitable example.
- 8) What is Multiple Allele? Explain Multiple Alleles w.r.t coat colour in rabbit.
- 9) What is sex linked inheritance? Describe the types of sex linked inheritance with any one suitable example?
- 10) What is chromosomal mutation? Describe the structural chromosomal mutation?
- 11) What is chromosomal mutation? Describe the numerical chromosomal mutation?

12) Explain the Geneic balance theory

Q. 3: Attempt any four of following

- 1) Incomplete dominance
- 2) Write a short note on Cytological evidences of crossing over.
- 3) Importance of Genetic Counselling
- 4) Complete linkage
- 5) Colour blindness
- 6) Incomplete dominance
- 7) Write a short note on synapsis and duplication.
- 8) Diagnosis of inherited diseases
- 9) Incomplete linkage
- 10) Haemophilia
- 11) Write short note on Inversion and Translocation
- 12) Types of Genetic variation
- 13) Write a short note on types of lethal gene with example.
- 14) Diagnosis of inherited diseases
- 15) Significance of linkage and crossing over
- 16) Heterogametic males
- 17) Write short note on any two-chemical mutagen
- 18) Write a note on ABO Blood group system
- 19) Write note on Structural abnormality in Chromosome.
- 20) Write a note on numerical abnormality in chromosome.
- 21) Chromosomal theory of sex determination