

**DEPARTMENT OF ZOOLOGY
R.S.P. COLLEGE, HARIADHANBAD**

B.Sc. Semester IV Zoology (Hons.)

1st Internal Examination, 2021

Paper- C-8(Genetics)

FM- 15 marks

Answer any three:

Q1. Discuss the Mendel's law of inheritance with suitable examples.

Q2. Explain complete dominance, incomplete dominance & Co-dominance with suitable examples.

Q3. What is gene interaction? Explain epistasis with suitable examples

Q4. Describe the structural alterations of Chromosomes and their related disorders.

Q5. Short notes on any two:

- a) **Lethal alleles**
- b) **Pleiotropy**
- c) **Linkage**
- d) **Sex linked inheritance**

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Paper- C-9 (Evolution)

FM- 15 marks

Answer any three:

Q1. What is Fossils? Describe the types of fossils.

Q2. Write an essay on phylogeny of horses.

Q3. Describe the chronological order of fossils of man.

Q4. Short notes on any two: 2.5 x 2=05

a) Hardy Weinberg law of Equilibrium

b) Genetic Drift

c) Neo Darwinism

Q5. Short notes on any two: 2.5 x 2=05

a) Recombination

b) Mutation

c) Isolation

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Paper- C-10 (Animal Behaviour)

FM- 15 marks

Answer any three:

Q1. What is Innate Behaviour? Explain.

OR

What is Acquired Behaviour? Explain.

Q2. Describe the social organization in honey bee.

Q3. Describe the different pattern of communication in animals. Explain

Chemical & Visual communication

Q4. Write an essay on migration in fishes OR Birds.

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Paper-P4 Practical

FM- 15 marks

Q1. Comment on the following with suitable diagrams.

2x2= 04

a) Archeopteryx

b) Analogous Organs

Q2. Explain genotypic analysis of haemophilia with the help of pedigree chart. 05

Q3. Comment on the following with suitable examples:

2 x2 = 04

a) Bee hives

b) Hippocampus

Q4. Describe Geotaxis with suitable example & diagram.

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B.Sc. Semester IV Zoology (GE)

1st Internal Examination, 2021

Paper- Theory

FM- 15 marks

Answer any three:

- Q1. What is an Ecosystem? Write about the components of ecosystem. 05**
- Q2. Give a detail account on energy flow of ecosystem. 05**
- Q3. Define bio-geochemical cycle. Describe carbon cycle. 05**
- Q4. Define ecological pyramid. Describe different types of ecological pyramids. 05**
- Q5. Explain food chain & food web. 05**

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B.Sc. Semester IV Zoology (GE)

1st Internal Examination, 2021

Paper- Practical

Q1. Spotting:

1x5= 05

- a) **Mouth parts of Culex**
- b) **Signet ring Stage**
- c) **Sugarcane Leaf hopper**
- d) **Gundhi Bug**
- e) **Life cycle of Honey bee**