

Rabindra Mahavidyalaya
Champadanga, Hooghly

B.Sc Zoology Sem V General
Internal Assessment 2022-2023

SEC-3 (Sericulture)

Full marks: $5 \times (1+1) = 10$

Time: 30 min

Answer any 5 questions:

- (a) What is the scientific name of Uzi fly?
(b) Write the name of 2 mulberry varieties?
- (a) Give 1 method to control Uzi fly.
(b) What is RKO?
- (a) What is a Maggot?
(b) Write one method of cocoon storage.
- (a) Name the different stages in the life cycle of Uzi fly.
(b) Define moutage.
- (a) How does Uzi fly enter into silkworm body?
(b) What is spinning?
- (a) What is Sericulture?
(b) What do you mean by pruning?
- (a) Draw and label the life cycle of silkworm.
(b) What are the food plants of Tasar silk moth?

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DSE-1 (Animal Biotechnology)

Time: 30 min

Full marks: $5 \times (1+1) = 10$

Answer any 5 questions.

- (a) What is the combined base pair length of 23 pairs of human chromosomes?
(b) Define Xenotransplantation.
- (a) What is the reason for c value paradox?
(b) What is chimera?
- (a) Name different forms of histone proteins.
(b) Differentiate between transgenic mice and knockout mice.
- (a) What does the nucleosome core particle consist of?
(b) Write the importance of beta lactoglobulin gene.
- (a) What is the full form of SDS PAGE?
(b) What is oncomouse?
- (a) What is electroporation?
(b) Write the limitation of DNA microinjection.
- (a) Name 2 non histone proteins necessary for eukaryotic genome organization.
(b) Write 2 application of transgenic animal.

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CC-11 (Molecular Biology)

Full marks: $5 \times (1+1) = 10$

Time: 30 min

Answer any 5 questions.

1. (a) Define split gene?
(b) What is A and B DNA?
2. (a) What is capping?
(b) Differentiate between semiconservative and Disruptive DNA replication.
3. (a) Differentiate between self splicing and non self splicing.
(b) What is Chargaff's rule?
4. (a) Write the function of RNase enzyme.
(b) What is the role of Telomerase in replication?
5. (a) What is RNA editing?
(b) Differentiate between 3' to 5' endonuclease and 5' to 3' endonuclease activity in DNA replication.
6. (a) Write the difference between inducible operon and repressible operon.
(b) Differentiate between the activity of DNA Polymerase I and DNA Polymerase delta.
7. (a) What is leader sequence?
(b) What is Tilt and Rise of DNA?

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CC-12 (Genetics)

Full marks: $5 \times (1+1) = 10$

(Time: 30 min)

Answer any 5 questions.

- (a) Give an example of co-dominance in human body.

(b) In which organism do you find Kappa particles?
- (a) Define Epistasis.

(b) What type of extra chromosomal inheritance is seen in *Chlamydomonas*?
- (a) What is lethal gene?

(b) Name the scientist who isolated streptomycin sensitive mutant of *Chlamydomonas*.
- (a) What is pseudoallele?

(b) What is non-mendelian inheritance?
- (a) Give any 2 examples of sex linked inherited disease.

(b) What is the full form of MERRF disease?
- (a) Give an example of Pleiotropism.

(b) What is the full form of LHON?
- (a) Write Mendel's law of segregation.

(b) Name a disease that shows maternal inheritance.

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DSE-1 (Applied Zoology)

Full marks: $5 \times (1+1) = 10$

Time: 30 min

Answer any 5 questions.

1. (a) Write scientific name of pulse beetle.
(b) What do you mean by 'dead end' host?
2. (a) Write the importance of *Pyrilla perpusilla*.
(b) Differentiate between primary and secondary host.
3. (a) Write the scientific name of rice weevil.
(b) What is commensalism?
4. (a) Write about the role of *Tribolium* sp. as pest.
(b) What is signet ring stage?
5. (a) Write about the indirect damage done by rice weevil.
(b) What is mutualism?
6. (a) Why is *Helicoverpa armigera* considered as pest.
(b) What is the product of erythrocytic schizogony.
7. (a) Write the scientific name of lemon butterfly.
(b) What is parasitism?