

Rahipet - DIST

# R FIRST REVISION TEST - 2023

## Standard - XII

Time : 3.00 hrs

**BIOLOGY**  
**BIO-BOTANY**  
**Section - A**

**Marks: 70**  
**MARKS: 35**

8×1=8

### I. Choose the correct answer:-

- 1) First cell of male gametophyte in angiosperm is  
a) Primary endosperm nucleus      b) nucleus  
c) megaspore      d) microspore
- 2) Fruitcolour in squash is an example of  
a) inhibitory genes      b) complementary genes  
c) dominant epistasis      d) recessive epistasis
- 3) Changing the codon AGC to AGA represents this type of mutation.  
a) deletion      b) Frameshift      c) Nonsense      d) Missense
- 4) Which of the following one is used as a biosensor.  
a) Electroporation      b) Vector      c) bioreactor      d) Electrophoresis
- 5) The prevention of large scale loss of biological interity  
a) Biofuel      b) Biosafety      c) Bioethics      d) Biopatent
- 6) Sticky gends of Boerhaavia and cleome support  
a) Hydrochory      b) Autochory      c) Zoochory      d) Anemochory
- 7) Which of the following is not a sedimentary cycle.  
a) Calcium      b) Sulphur      c) Phosphorus      d) Nitrogen
- 8) The plants which are grown in Silivpasture system are  
a) Teak & Sandal      b) Clitoria and begonia  
c) Solenum and Crotalaria      d) Sesbania and Acacia

### Section - B

### II. Answer any four questions:-

4×2=8

- 9) What is heterois?
- 10) Which is called as King of bitters?
- 11) What is endothelium?
- 12) What is meant by Cytoplasmic inheritance?
- 13) What is genemapping? Mention its uses.
- 14) What do you know about the word PBR 322.

### Section - C

### III. Answer any three questions. (Q.No.19 compulsory):-

3×3=9

- 15) Give an account on Cryopreservation?
- 16) What is Vivipary? Name a plant group which exhibit Vivipary.
- 17) Construct the Food chain with the following data:-  
Hawk, Plants, Frog, Snake, Grasshopper
- 18) Explain Carbon Sequestration (CCS)
- 19) Differentiate Primary introduction from Secondary introduction.

### Section - D

### IV. Answer the following questions:-

2×5=10

- 20) With suitable diagram explain the structure of Ovule.  
[or]  
Explain dominant epistasis with an example.
- 21) Enumerate the anatomical adaptations of xerophytes.  
[or]  
Generally human activities are against to the ecosystem. Whereas you a student.  
How will you help to protect the ecosystem.

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(2)  
BIO- ZOOLOGY  
Section - I

XII BIOLOGY  
MARKS: 35  
8×1=8

i) Answer all the questions. ii) Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer:

- 1) Which one of the following are at high risk extinction due to habitat destruction  
a) Amphibians                      b) Birds                      c) Mammals                      d) Echinoderms
- 2) Why *Saccharomyces cerevisiae* is more suitable for production of recombinant interferon than *E.coli*?  
a) *E.coli* does not possess the machinery for glycosylation of proteins  
b) *E.coli* cannot be used in bio fermentor  
c) *E.coli* does not have suitable plasmid for the production of proteins  
d) *E.coli* is not easily available for the production of proteins.
- 3) ELISA is mainly used for  
a) Selecting animals having desired traits                      b) Detection of mutations  
c) Detection of pathogens                      d) Selecting plants having desired traits
- 4) The mature sperms are stored in the \_\_\_\_\_  
a) Epididymis                      b) Seminiferous tubules  
c) Seminal vesicle                      d) Vas deferens
- 5) A mRNA molecule is produced by \_\_\_\_\_  
a) Duplication                      b) Replication                      c) Translation                      d) Transcription
- 6) Which period was called "Age of fishes"?  
a) Devonian                      b) Permian                      c) Ordovician                      d) Triassic
- 7) Meselson and Stahl's experiment proved \_\_\_\_\_  
a) Transduction                      b) Transformation  
c) DNA is the genetic material                      d) Semi - conservative nature of DNA Replication
- 8) Competition between species leads to \_\_\_\_\_  
a) Amensalism                      b) Extinction                      c) Symbiosis                      d) Mutation

## Section - B

II. Note: Answer any four of the following questions:-

4×2=8

- 9) What is Surrogacy?
- 10) Write the cause of Down's Syndrome.
- 11) Who disproved Lamarck's theory of acquired characters? How?
- 12) Write any two differences between active and passive immunity.
- 13) Which is referred to as Industrial alcohol? Why?
- 14) What does gene therapy mean?

## Section - C

III. Note: Answer any three of the following questions.

Question number 19 is compulsory:-

3×3=9

- 15) What is Aminocentesis? Why a statutory ban is imposed on this technique?
- 16) State the name of an immunosuppressant used in organ transplantation is produced from the fungus *Trichoderma polysporum* and state its uses.
- 17) Differentiate natality from Mortality?
- 18) Write about gene banks.
- 19) In the XY chromosomal system sex determination, males have only one X Chromosome, whereas female have two, How does the organism compensate for this dosage differences between the sexes?

## Section - D

IV. Note: Answer the following questions:-

2×5=10

- 20) a) Explain the structure of Human Ovum with a neat labelled diagram. [or]  
b) Write the salient features Human Genome Project.
- 21) a) Explain the structure of Immunoglobulin with suitable diagram. [or]  
b) Write about the effects of chemicals used in the field of Agriculture.

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