



**Grand
Test**

**HSC EXAMINATION SET - A
BIOLOGY**

M.Marks : 70

Duration : 3 Hrs

SECTION-I (BOTANY)

Q.1 Select and write the most appropriate answer from the given (7)
alternatives for each sub-question:

- 1) In albuminous seeds the endosperm present is
 - a) Present in cotyledons
 - b) Present in the form of perisperm
 - c) Absent
 - d) Present in the form of nucleolus.

- 2) Guano deposits are given by
 - a) Marine fish
 - b) Animals
 - c) Marine birds
 - d) Domestic animals

- 3).....is a segment of D.N.A that participates in recombination through crossing over during meiosis.
 - a) Crison
 - b) Recon
 - c) Muton
 - d) Gene

- 4) The disease free variety of wheat is
 - a) Pusa Sadabhar
 - b) Pusa Subhra
 - c) Pusa Gaurav
 - d) Himgri

- 5) Papaya is an example of
 - a) Xenogamy
 - b) Gietonogamy
 - c) Autogamy
 - d) Hybridization

- 6) In Michelia, self pollination is avoided by
 - a) Protogyny
 - b) Unisexuality
 - c) Self sterility
 - d) Protoandry

- 7) The spatial patterns in an ecosystem determined by the height of the organism is
 - a) Zonation
 - b) Niche
 - c) Stratification
 - d) Gradation

Q2. A. Answer in one sentence (6)

- 1) What is the name of the microbe used in the wine industry
- 2) What is the meaning of pure line
- 3) What is cryptogam
- 4) What is epihdrophily
- 5) What is leaching
- 6) What is VAM

Q2. B. Sketch and label clover leaf label of t- R.N.A. (2)

Q2. C. Answer any two of the following :

- a) Explain in brief the role of ozone (2)
- b) Explain the significance of polar nuclei (2)
- c) Explain how photo respiration is avoided in C₄ plants (2)

Q3. A. Answer in one sentence (6)

- a) State and explain Mendel's second law of Inheritance
- b) Give the characters of Genetic code
- c) Write a note on Gano-bacterial Fertilisers

Q3. B Sketch and label v.s. of mature anatropus ovule (3)

Q4. Give brief account of replication of bacetriophage (7)

OR

Describe non-cyclic photophosphorylation with diagramatic Representation. (7)

SECTION II (ZOOLOGY)

Q5. Select and write the most appropriate answer from the given (7)
alternatives for each sub-question:

- 1) Passive immunity is obtained by injecting
a) Antigens b) Antibodies c) Antibiotics d) Vaccines.
- 2) Failure of descending testes into the scrotum is known as
a) Cryptorchidism b) Tubectomy
c) Castration d) Masorctium
- 3) Which of the following is not X – linked disorder
a) Haemophilia b) Night Blindness
c) Myopia d) Hypertrichosis
- 4) Key factor of D.N.A. profiling is
a) Sequence of nucleotides b) D.N.A. isolation.
c) VNTR d) RFLP
- 5) Bird flu is caused by
a) Bacteria b) Protozoans
c) Fungus d) Virus
- 6) Anti serum has
a) Antigen b) Antibody
c) W.B.C. d) R.B.C.
- 7) W.B.C. with a kidney shaped nucleus is
a) Eosinophil b) Neutrophil
c) Lymphocyte d) Monocyte

Q6. A. Answer in one sentence (6)

- 1) Why urethra is also called urogenital duct.
- 2) What was the cranial capacity of cro-magnan man.
- 3) What is vaccine.
- 4) What are transgenic animals.
- 5) Name the causative agent of typhoid.
- 6) What is lymph

Q6. B. Sketch and label X & Y chromosomes to show non homologous parts of them. (2)

Q.6. C. Answer **any TWO** of the following :

- a) What is age structure? Explain (2)
- b) Give the functions of cerebral hemispheres (2)
- c) What is the result of hybridization with respect to D.N.A finger printing. (2)

Q7. A. Answer **any TWO** of the following : (6)

- a) What is air pollution? Mention hazards of air pollution.
- b) What is filariasis? Explain signs and symptoms
- c) Explain the characteristics of Propiophitecus, Dryphitecus and Ramaphitecus.

Q7. B Sketch and label the diagram illustrating formation of urine (3)

Q8. Define reflex action. Explain the mechanism of reflex action and give The types of reflex actions with significance. (7)

OR

What is menstrual cycle and Explain the various phases of it. (7)