

T COMMON FIRST REVISION TEST - 2025

Standard - XII

Reg.No.

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Time: 3.00 hrs.

BIOLOGY

Marks: 70

PART - I [BIO - BOTANY]

Marks : 35

Section - A

8×1=8

Note: i) Answer all the questions.

ii) Choose the correct answer.

- 1) Which of the following represent mega gametophyte?
a) Ovule b) Embryo sac c) Nucellus d) Endosperm
- 2) A plant called 'X' possesses small flower with reduced perianth and versatile anther. The probable agent for pollination would be
a) water b) air c) butterfly d) beetle
- 3) How many different kinds of gametes will be produced by a plant having the genotype AABbCC?
a) three b) four c) nine d) two
- 4) Fruit colour in cucumber is an example of
a) Recessive epistasis b) Dominant epistasis
c) Complementary genes d) Inhibitory genes
- 5) If haploid number in a cell is 18. The double monosomic and trisomic number will be
a) 34 and 37 b) 34 and 35 c) 37 and 35 d) 17 and 19
- 6) E.CORI cleaves DNA at
a) AGGGTT b) GTATATC c) GAATTC d) TATAGC
- 7) An analysis of chromosomal DNA using the southern hybridisation technique does not use
a) Electrophoresis b) Blotting
c) Autoradiography d) Polymerase chain reaction
- 8) The prevention of large scale loss of biological interity
a) Bio patent b) Bio ethics c) Bio safety d) Bio fuel

Section - B

Note: Answer any four of the following questions.

4×2=8

- 9) What is polyembryony?
- 10) Define - genetics.
- 11) What you know about PBR 322?
- 12) Write the advantages of Bt cotton.
- 13) Give some examples for micropropagation in plants.
- 14) What is bioremediation?

Section - C

Note: Answer any three of the following questions.

3×3=9

Q.No. 19 is compulsory.

- 15) Differentiate Grafting and Layering.
- 16) Differentiate Incomplete Dominance and Codominance.
- 17) What is gene mapping? Write its uses.
- 18) Write brief notes about cryopreservation.
- 19) What are the materials used to grow micro-organisms like spirulina?

Section - D

Note: Answer the following questions.

2×5=10

- 20) List out the functions of tapetum. (OR)
Explain polygenic inheritance with an example.
- 21) Explain the mechanism of crossing over. (OR)
How do you use the bio-technology in modern practice?

PART - II [BIO - ZOOLOGY]**Marks : 35****Section - I****Choose the correct answer:****8×1=8**

- 1) Klinefelter's syndrome is characterized by a Karyotype of
a) XYY b) XO c) XXX d) XXY
- 2) Ochoa's enzyme is
a) DNA polymerase b) Ligase enzyme
c) Polynucleotide phosphorylase d) Helicase enzyme
- 3) The process which the sperm undergoes before penetrating the ovum is
a) Spermiation b) Cortical reaction
c) Spermiogenesis d) Capacitation
- 4) The first one to encounter the antigen that enters the tissue spaces is
a) Thymus b) Lymph node c) Peyer's patches d) Adenoids
- 5) In which mode of reproduction variations are not seen?
a) Asexual b) Sexual c) Conjugation d) b and c
- 6) A population will not exist in Hardy-Weinberg equilibrium if
a) Individuals mate selectively b) There are no mutations
c) There is no migration d) The population is large
- 7) **Choose the wrong statement:**
a) Condom safeguards the users from STDs like AIDS.
b) Copper releasing IUDs can remain in the uterus for five to ten years.
c) Permanent contraception methods block the transport of the gametes and prevents conception.
d) Sperm remains alive for about 48 hours in the female reproductive tract.
- 8) **Choose the correct pair:**
a) Amphetamines - Stimulant
b) LSD - Narcotic
c) Heroin - Psychotropic
d) Benzodiazepine - Pain killer

Section - II**Answer any four of the following:****4×2=8**

- 9) List out the major gases seems to be found in the primitive earth.
- 10) Differentiate between External and Internal fertilization.
- 11) Define: Wobble Hypothesis
- 12) Expand the following: (a) ZIFT (b) ICSI
- 13) Why are sex linked recessive characters more common in the male human beings?
- 14) What is called as LH surge?

Section - III**Answer any three of the following. Question No. 19 is compulsory. 3×3=9**

- 15) What are Tonsils?
- 16) Distinguish between structural gene, regulatory gene and operator gene.
- 17) Name any three major STDs and their causative agents.
- 18) Draw and label the human ovum.
- 19) State and define the evolutionary process expressed by Darwin's Finches. Name the gene associated with the variation in their beak shape.

Section - IV**Answer in detail:****2×5=10**

- 20) Give a detailed account on the Applications and future challenges of Human Genome Project. **(OR)**
Explain the various barrier methods to control human population.
- 21) Explain the evidences from comparative anatomy in biological evolution. **(OR)**
Describe the structure of human sperm with a neat labelled diagram.