

T COMMON FIRST REVISION TEST - 2025

Standard - XII

Reg.No

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]
Section - I

XII - Biology

Marks : 35

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.