

RS-2

SECOND REVISION TEST - 2025**12** - Std**BIOLOGY**

Time : 3.00 Hrs

BIO - BOTANY

Marks : 70

SECTION - I

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

Choose the correct answer.**8 x 1 = 8**

- Changing the codon AGC to AGA represents (a) missense mutation (b) nonsense mutation (c) frameshift mutation (d) deletion mutation
- Transmitting tissue is found in (a) micropylar region of ovule (b) Pollen tube wall (c) Stylar region of gynoecium (d) Integument
- In which techniques ethylene bromide is used? (a) Southern Blotting techniques (b) western Blotting techniques (c) Polymerase chain reaction (d) Agrose Gel electrophoresis
- Sticky glands of Boerhaavia and cleome support (a) Anemochory (b) Zoochory (c) Autochory (d) Hydrochory
- Which of the following is / are not the mechanism of decomposition (a) Eluviation (b) Catabolism (c) Anabolism (d) Fragmentation
- Depletion of which gas in the atmosphere can lead to an increased incidence of skin cancer? (a) Ammonia (b) Methane (c) Nitrous oxide (d) Ozone
- Jaya and Ratna semidwarf varieties of (a) wheat (b) rice (c) cowpea (d) mustard
- The active principle trans -tetra hydrocannabinol is present in (a) Opium (b) Curcuma (c) Marijuana (d) Andrographi

SECTION - II**Answer any four questions.****4 x 2 = 8**

- Write short note on Parthenocarpy.
- What is the differences between missense and nonsense mutation?
- Name the chemicals used in gene transfer.
- What is seed ball?
- What is test cross?
- Write a note on Heterosis.

SECTION - III**Answer any three questions. (Question No. 19 is Compulsory).****3 x 3 = 9**

- Write the cosmetic uses of Aloe.
- What is Cantharophily.
- Give an account on cryopreservation
- Pyramid of energy is always upright give reasons.
- Draw a labelled diagram structure of L.S. of an Ovule.

SECTION - IV**Answer all questions.****2 x 5 = 10**

- (a) Explain incomplete dominance with the example . (OR)
(b) what are millets ? what are its types ? Give example for each type.
- (a) Enumerate the characteristic features of Entomophilous flowers. (OR)
(b) Write the application of plant Tissue Culture.

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(BIOLOGY- ZOOLOGY)**I Answer ALL the questions.****(8 × 1 = 8)**

- 1) ——— is the period of growth between the birth of the individual upto reproductive maturity.
 a) vegetative phase b) maturity phase c) reproductive phase d) Senescent phase
- 2) Colostrum is less in ——— a) Ig E b) Ig A c) Vitamin A d) Lactose
- 3) Read the given statements and select the correct option.

Statement 1: Diaphragms, cervical caps and vaults are made of rubber and are inserted into the female reproductive tract to cover the cervix before coitus.

Statement 2: They are chemical barriers of conception and are reusable.

(a) Both statements 1 and 2 are correct and statement 2 is the correct explanation of statement 1.

(b) Both statements 1 and 2 are correct but statement 2 is not the correct explanation of statement 1.

(c) Statement 1 is correct but statement 2 is incorrect.

(d) Both statements 1 and 2 are incorrect.

- 4) Which of the following is the new world monkey?
 a) Chimpanzees b) Platyrrhina c) Gibbons d) Orangutans

5) **Choose the correctly match pair.**

- a) Amphetamines - Stimulant
 b) LSD - Narcotic
 c) Heroin - Psychotropic
 d) Benzodiazepine - Pain killer

- 6) Which is also referred as the "queen of drugs"?
 a) Tetracycline b) Erythromycin c) Penicillin d) Chloromycetin
- 7) PCR proceeds in three distinct steps governed by temperature, they are in order of
 a) Denaturation, Annealing, Synthesis b) Synthesis, Annealing, Denaturation
 c) Annealing, Synthesis, Denaturation d) Denaturation, Synthesis, Annealing
- 8) Which of the following region has maximum biodiversity
 a) Taiga b) Tropical forest c) Temperate rain forest d) Mangroves

II Answer any FOUR questions.**(4 × 2 = 8)**

- 9) Differentiate between the External and Internal fertilization.
- 10) What is called operons? How many operons are present in E. coli?
- 11) What are the functions of immunoglobulin?
- 12) What is gene therapy? what are its types?
- 13) What is acclimatisation?
- 14) Amazon forest is considered to be "the lungs of the planet" - Justify this statement.

III Answer any THREE questions. Qn.No.19 is Compulsory.**(3 × 3 = 9)**

- 15) Differentiate Growth Curves.
- 16) List the advantages of biogas plants in rural areas.
- 17) Write a note on (i) bottle neck effect (ii) founder's effect.
- 18) What is the reason for formation of Down's syndrome?
- 19) Lymphogranuloma Venereum is a STD - Write the preventive measures.

IV Answer the following questions.**(2 × 5 = 10)**

- 20) Explain the structure of ovum with a neat diagram. **(OR)**
 What are the salient features of human genome project?
- 21) Explain the process of replication of HIV retrovirus after getting into the body of the person. **(OR)** What are the effects of water pollution?