

Class : 12Register
Number**FIRST REVISION EXAMINATION - JANUARY - 2024**

Time Allowed : 3.00 Hours

BIOLOGY

|Max. Marks : 70

Part - I (Bio-Botany) (Marks : 35)

Section - I

Note. (i) Answer All the questions.

8×1=8

(ii) Choose the most appropriate answer from the given four alternatives and write the option code and corresponding answer.

- Plant having similar genotypes produced by plant breeding are called
a) Clone b) Haploid c) Autopolyploid d) Genome
- Mycorrhiza promotes plant growth by
a) Saving as plant growth regulators b) Absorbing inorganic ions from soil
c) Helping the plant in utilizing atmospheric nitrogen d) Protecting the plant from-infection
- The prevention of large scale loss of biological interity
a) Biopatent b) Bioethics c) Biosafety d) Biofuel
- Select type period for mendel's hybridization experiments.
a) 1856-1863 b) 1850-1870 c) 1857-1869 d) 1870-1877
- Consider the following statement (s)
i) In protandrous flower pistil matures earlier.
ii) In protegynous flowers pistil matures earlier.
iii) Herkegamy is notice in unisexual flowers.
iv) Distyly is present in primula
a) (i) and (ii) are correct b) (ii) and (iv) are correct
c) (ii) and (iii) are correct d) (i) and (iv) are correct
- Green gram is a native of -----
a) India b) Philippines c) North America d) Brazil
- Which of the following is not a sedimentary cycle.
a) Calcium cycle b) Nitrogen cycle c) Phoshorous cycle d) Sulphur cycle
- The term biotechnology was coined by
a) T. Boveri b) W.Bateson c) Karl Ereky d) Erich von Tschermak

SECTION - B

II. Answer any four questions.

4×2=8

- Differentiate primary introduction from secondary introduction.
- Draw and label the parts of polyembryory embryosac.
- What is ozone hole.
- Define Ten percent law.
- What are multiple alleles.
- Why does a students or a driver prefer tea or coffee during night?

SECTION - C

III. Answer any three questions. Question No. 19 is compulsory.

3×3=9

- "Endothecium, is associated with dehiscence of anther" Justify the statement.
- Write the significance of ploidy.
- Discuss the gross primary productivity is more efficient than net primary productivity.
- Distinguish habitat ad niche.
- You are working in a biotechnology lab with a bacterium E.Celi. How will you cut the nucleotide sequence Explain it.

SECTION - D

IV. Answer all the following:

2×5=10

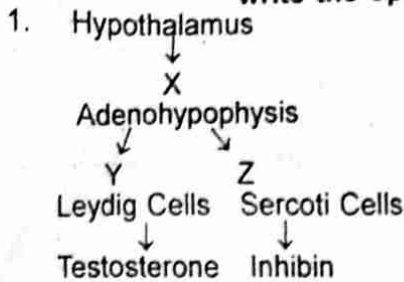
- (a) Bring out the inheritance of chloroplast gene with an example. (OR)
(b) Based on the material used, how will you classify the culture technology? Explain it.
- (a) Suggest a solution to water crisis and explain its advantages. (OR)
(b) What are the king and Queen of spices? Explain about them and their uses?

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PART - II (BIO-ZOOLOGY) (Max. Marks: 35)
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 answer. 8x1=8



In the above diagram identify X, Y and Z with respect to the hormonal role given below

- | | | | | | |
|-----------------|------------|------------|--------------|--------|---------|
| 1. Progesterone | 2. CH | 3. HCG | 4. Estradiol | 5. FSH | 6. GnRH |
| a) 3, 4, 2 | b) 6, 2, 5 | c) 1, 4, 6 | d) 4, 5, 2 | | |
- Which of these is used to Control Human Population?
a) Estrogen + Progesterone b) IUCD + MTP
c) Tubectomy + Vasectomy d) All of these
 - The number of barr bodies of a person with a Chromosome configuration of XXXOY is
a) 3 b) 4 c) 0 d) 2
 - DNA or RNA segment tagged with a radioactive molecule is called
a) Plasmid b) Vector c) Probe d) Clone
 - In E.Coli DNA has 18% of Cytosine residues. What will be the Fraction of Adenine?
a) 18% b) 32%
c) 36% d) Data Insufficient
 - The Origin of Angiosperm took place during
a) Mesozoic Era b) Coenozoic Era c) Archaeozoic Era d) Proterozoic Era
 - BCG stands for
a) Bacterio - Chemical Gangrene b) Bacteria Culture Growth
c) Bacille Calmette Guerin d) Bacterial Cell Genome
 - The J - shaped curve lacks
a) Lag phase b) Exponential Phase
c) Stationary Phase d) None of these

SECTION - B

II. Answer any four questions. (Q. No: 14 is Compulsory) 4x2=8

- Skewness for male sex creates an imbalance in Sex ratio - comment on the steps taken by the Government to address the Imbrogio.
- Define Infertility. Sort out the reasons for the sprouting up of Infertility Clinics in India. recently.
- Define Gene. How do they intend to bring out Evolution.
- State the postulates of Erwin - Chargaff rule of base pairing.
- What are Viruses? Why are they called Cell Hackers?
- Altrusim (Kin Selection) acquaints to Polymorphism of a bee hive Colony. Provide convincing evidences to support it.

SECTION - C

III. Answer any 3 questions. (Question No. 19 is compulsory) 3x3=9

- Inspite of various initiatives taken by the Govt like raising the marriageable age, India leads the world with an exploding population - Criticize.
- Are an RT's Curable? If so Compare and Contrast the intensity of Bacterial and Viral RTI caused by various Pathogens (in general) and its preventive measures.
- The risk of Positive and Negative blood grouping is less offensive during first Parturition than in the subsequent Parturitions. Assess and Support your answer with respect to the Complication.
- Genetic drifting aids in Population shifting - Discuss.
- What is Wobble base pairing? Cite an example to explain the same.

SECTION - D

IV. Answer in Detail. 2x5=10

- What is Colour Blindness? Why does it occur?
 - Bring out the reasons for the Predominance of sex - linked Inheritance in men than woman.
 - Schematically represent the Inheritance of it, tracing the pattern of Inheritance. (OR)
- Differentiate Ascariasis from filariasis.
 - Explain Nuclear transfer Technique using Simple Schematic representation. (OR)
 - The Taxonomic impediment makes us unaware of the magnitude of Bio diversity substantiate your answer with reference to Indian Sub Continent. What are the measures one can adopt to conserve the same.