

# 12th biology important questions

## BIO BOTANY

### LESSON 1. A. ANBU M.SC.,B.ED., 8508429396

1. Pollinium Corpusculum retinaculum.
2. T.s of Mature anther .
3. Cryopreservation
- 4.Exine and intine.
5. Sporopollenin
6. Development of male gametophyte
7. **Types of ovule and structure of ovule**
- 8.Embryosac
- 9.Monosporic and Tetrasporic
10. Difference between protagyny and protandry?
11. Pollination in salvia and vallisneria
12. Significance of pollination
13. Endosperm and its function
- 14.Apomixis , Diplospory andApospory
15. Significance of parthenocarpy

### LESSON 2

- 1.Difference between continuous variation and discontinuous variation
2. Mono hybrid cross dihybrid cross
3. Incomplete dominance, lethal dominance
- 4.Pleiotropy
5. Dominant epistasis . Difference Between epistatic and hypostatic .

### LESSON 3

- 1.Synteny
2. Difference between CIS configuration and trans configuration
3. Kinds of linkage
4. Linkage and crossing over
5. Mechanism of crossing over
6. Genetic map and its uses
7. Multiple allele and its character
8. Sex determination in maize
9. Types of mutation
10. Chromosomal aberration.
11. Significance of poidy
12. Allopolyploidy

### LESSON 4. A. ANBU M.SC.,B.ED., 8508429396

1. Fermentation
2. SCP and its application
3. Steps involved in recombinant DNA
4. Restriction Enzymes ,Exo end Endo.
5. Transposons or jumping genes
- 6.PUC 19
7. **DIRECT AND INDIRECT GENE TRANSFER**
8. **BLUE WHITE COLONY METHOD**
9. **SADHAN BLOTTING TECHNIQUE**
10. Difference between blotting technique
11. **RNA INTERFERENCE**
12. BT cotton advantages disadvantages
13. **BIOREMEDIATION**
14. Bioprospecting ( Turmeric)
15. **APPLICATIONS OF BIOTECHNOLOGY**
16. **PBR 322 / TI PLASMID DNA LIGASE**

#### **LESSON 5**

1. BASIC CONCEPTS OF PTC
2. Techniques involved in PTC
3. **CELL SUSPENSION CULTURE**
4. APPLICATIONS OF PLANT TISSUE CULTURE
5. **ARTIFICIAL SEEDS AND ITS ADVANTAGES**
- 6 Future of bio technology

#### **LESSON 6**

1. Habitat and niche
2. Temperature
3. Pedology and pedogenesis
4. Soil profile
5. Types of soil particle
6. Different interactions of plant
7. Holo parasite and hemi parasite
9. Competition and Amensalism
10. **HYDROPHYTES AND XEROPHYTES**
11. **DROUGHT ESCAPERS AND TRUE XEROPHYTES**

#### **LESSON 7. A. ANBU M.SC.,B.ED., 8508429396**

1. LAW OF THERMODYNAMICS
2. **FOOD CHAIN FOOD WEB AND ITS SIGNIFICANCE**
3. **ECOLOGICAL PYRAMIDS**
4. Carbon cycle
5. Limnetic zones
6. Pioneers

7. Difference between primary and secondary succession
8. **HYDROSERE /CLASSIFICATION OF PLANT SUCCESSION.**
9. **SIGNIFICANCE OF PLANT SUCCESSION.**

#### **LESSON 8**

1. Effects of global warming
2. **EFFECTS OF OZONE DEPLETION**
3. Benefits of agroforestry
4. **DEFORESTATION AND AFFORESTATION**
- 5 Alien invasive species
- 6.**CCS/ CFP / BIOCHAR**
7. Environment impact assessment ( **ELA** )
8. **IMPORTANT OF GIS AND APPLICATIONS OF SATELLITES**

#### **LESSON 9**

1. Biofertilizer and biopesticides
2. Seaweed liquid fertilizer
3. Objections of plant breeding
4. **ACCLIMATIZATION**
5. **DIFFERENCE BETWEEN PRIMARY AND SECONDARY INTRODUCTION**
6. **STEPS IN HYBRIDIZATION AND ITS TYPES**
7. **HETEROSIS**

#### **LESSON 10**

1. Spices
2. Timber
3. **TRADITIONAL SYSTEM OF MEDICINE**
4. **NILAVEMBU AND KEEZHANELLI**
5. Opium poppy and cannabis
6. **COMMON MEDICINAL PLANTS**
7. King of spices /queen of spices /Dates of India / SHC / LACOSONE /THC

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#### **BIO ZOOLOGY IMPORTANT QUESTIONS**

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#### **LESSON 1**

1. **Sexual reproduction**
2. Phases of life cycle
3. natural and artificial parthenogenesis
4. complete and incomplete parthenogenesis
5. **oviparous/ viviparous / ovoviviparous**

## LESSON 2

- 1.Cryptorchism
- 2.Sertolicells / leydigcells
- 3.Male reproductive system
- 4.Female reproductive system**
- 5.Spermiogenesis / spermiation
- 6.Spermatogenesis /oogenesis
- 7.Structure of sperm /ovum
- 8.Hyaluronidase
- 9.Trimester 1,2,3.

### INTERESTING FACTS

## LESSON 3

- 1.Female foeticide/ infanticide .
- 2.Amniocentesis
- 3.POCSO /lactational amenorrhoea
- 4.Barrier methods
- 5.Diffe.,tubectomy and vasectomy
- 6.Assisted reproductive technology (ART)**
- 7.Ultra sound scanning

## LESSON 4

- 1.Multiple allele
- 2.ABO blood groups**
- 3.Incompatibility RH factors
- 4.Heterogametic male one example
- 5.Herogametic female one example
6. Y chromosome and male development
- 7.Barr body /Kin selection
- 8.Holandric genes
- 9.Colour blindness
- 10.Karyotyping / applications

## LESSON 5

- 1.Griffith experiment or Transformation
- 2.Harshey and chase experiment
- 3.RNA WORLD
- 4.CENTRAL DOGMA OF DNA
- 5.TEMPLATE STRAND CODING STRAND
- 6.Monocistronic /Polycystranic
- 7.TRANSCRIPTION IN PROKARYOTES**
- 8.TATA BOX PRIBNOW BOX

9. TRANSCRIPTION IN EUKARYOTES
10. INTROS/ EXONS
11. Capping and tailing
12. SALIENT FEATURES OF GENETIC CODE
13. Wobble hypothesis
14. Open reading frame / untranslated region
15. TRANSLATION
16. LAC OPERON
17. HGB/ SALIENT FE..., HGB/APPLICATIONS
18. **DNA FINGER PRINTING**

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#### LESSON 6

1. Cocervates
2. Geological timescale
3. Protobionts
4. Urey Miller concept
5. Use and disuse Inheritance of acquired character
6. Darwin theory of natural selection
8. Salient features of mutation theory
9. **Modern synthetic theory**
10. Darwin finches
11. **HARDY WEINGBERG LAW**

#### LESSON 7

1. Nipah virus
2. Trypanosoma gambiense
3. **Life cycle of plasmodium**
4. Athletes foot / Ringworm
5. Ascariasis / filariasis
6. Types of innate immunity
7. Diff., passive and active immunity
8. Diff., primary and secondary response
9. lymph node
10. **Structure of immunoglobulin**
11. HAPTEN / EPITOPE / PARATOPE
12. AGGLUTININ / OPSONIZATION
13. ANTIGEN ANTIBODY INTERACTION
14. Effects of drug and alcohol

#### INTERESTING FACTS

LESSON 8

- 1.QUEEN OF DRUGS
- 2.Narrow spectrum/Broad spectrum
- 3.Syberbug /Toddy /Zymology
- 4.Biodiesel/ Cyclosporine A
- 5.Microbial fuel cell
- 6.**BIOREMEDIATION ( EXPECTED 5 MARK)**

LESSON 9

- 1.**RECOMBINANT HUMAN INSULIN**
- 2.Human alpha lactalbumin
- 3.interferons
- 4.GENE THERAPY/ TYPES
- 5.ELISA
- 6.**POLYMERASE CHAIN REACTION**
- 7.APPLICATIONS OF PCR

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LESSON 10

- 1.Bergmans/Allen's /Jordens
- 2.Van thoffs rule /Phototaxis /Phototropism / photokinesis
- 3.Properties of water
- 4.ACCLIMATIZATION
- 5.NATALITY/MORTALITY
- 6.IMMIGRATION EMIGRATION
- 7.POPULATION INTERACTION

LESSON 11

- 1.Types of diversity
  - 2.Magnitude of biodiversity
  - 3.Species area relationship
  - 4.Causes of biodiversity
  - 5.**Hotspots**
  - 6.**Extinction /Types**
  - 7.Biosphere reserve
- NATIONAL PARK /WILDLIFE SANCTUARY

LESSON 12

- 1.BIOMAGNIFICATION OF DDT
- 2.EUTROPHICATION / TYPES
- 3.USES OF ORGANIC FERTILIZERS

- 4.DEWATS /RZWT
- 5.MEDICAL / E / PLASTIC WASTE
- 6.ECOSAN TOILETS

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**ALL THE BEST STUDENTS**