

UPDATED BIOLOGY IMPORTANT QUESTIONS

10/2/2023

BIO BOTANY.

LESSON 1.

A. ANBU M.SC.,B.ED., 8508429396

1. Pollinium .
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 protogyny and protandry?
11. Pollination in salvia and vallisneria
12. **Significance of pollination**
13. **Endosperm and its function**
14. Apomixis , **Diplospory and Apospory**
15. Significance of parthenocarpy

LESSON 2

1. Difference between continuous variation and discontinuous variation
2. Mono hybrid cross / dihybrid cross
3. **Incomplete dominance,**
4. Pleiotropy
5. **Dominant epistasis** . Difference Between epistatic and hypostatic .
6. BACK CROSS / TEST CROSS
7. **ATAVISM**

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 polypidy**
12. **Allopolyploidy**

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

- 1.PLASMIDS / PALINDROME SEQUENCE
2. SCP and its application
3. Steps involved in recombinant DNA
4. Restriction Enzymes ,Exo end Endo.
5. Transposans 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
7. Cybrid /SECONDARY METABOLITES

LESSON 6

1. Habitat and niche
2. **VIVIPARY / ECOLOGICAL HIERARCHY**
3. Pedology and pedogenesis
4. Soil profile /**ALBEDO EFFECT/ EDGE EFFECT**
5. Types of soil particle
6. **HYGROPHYTES AND TROPOPHYTES**
7. **HOLO PARASITE & PARTIAL PARASITE**
9. Competition and Amensalism
10. **HYDROPHYTES AND XEROPHYTES**
11. **DROUGHT ESCAPERS AND TRUE XEROPHYTES**
- 12.**SEED BALL / ADVANTAGES**

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.TYPES OF CARBON

5.MECHANISM OF DECOMPOSITION

6.Pioneers / **SUCCESSION**

7. Difference between primary and secondary succession

8. **HYDROSERE /CLASSIFICATION OF PLANT SUCCESSION.**

9. **SIGNIFICANCE OF PLANT SUCCESSION.**

10.**GROSS PRIMARY PRODUCTIVITY/NET PRIMARY PRODUCTIVITY**

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**

9.**REMOTE SENSING AND ITS USES**

10.**HOW TO PROTECT OUR ECOSYSTEM**

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**

8.**INDIAN PLANT BREEDERS**

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 / **SHU / LACOSONE /THC (marijuana)**

8.Pseudocereal / **MORPHINE / LSD /**

9.**PREPARATION OF ORGANIC PESTICIDES**

10. **TRADITIONAL SYSTEM OF MEDICINE**

A. ANBU M.SC.,B.ED., 8508429396

BIO ZOOLOGY IMPORTANT QUESTIONS

*A.ANBU M.SC.,B.ED.,8508429396

LESSON 1

1. **Sexual reproduction**

2. Phases of life cycle 3. natural and artificial parthenogenesis

4. complete and incomplete parthenogenesis

5. **oviparous/ viviparous / ovoviviparous**

6. **PLASMOTOMY /**

7. **SPORULATION AND STROBILATION DIFFERENCE.**

LESSON 2

1. Cryptorchism

2. Sertolicells / Leydig cells

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 / **CERVICAL CANCER**

3. POCOS / lactational amenorrhoea

4. Barrier methods

5. Diffe., tubectomy and vasectomy

6. **Assisted reproductive technology (ART)**

7. Ultra sound scanning

8. **BACTERIAL STI**

LESSON 4

1. Multiple allele

2. **ABO blood groups**

3. Incompatibility RH factors

4. Heterogametic male one example

5. Heterogametic female one example

6. Y chromosome and male development

7. **Barr body / LYONS HYPOTHESIS**

HAPLO DIPLOID IN HONEY BEE (KIN SELECTION)

8. Holandric genes

- 9.Colour blindness/ TURNER SYNDROME
- 10.Karyotyping / applications
- 11/THALASSEMIA /DOWN & PATAU SYNDROME

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 / Leading & lagging strand
- 14.Open reading frame / untranslated region
- 15.TRANSLATION
- 16.LAC OPERON**
- 17.HGB/ SALIENT FE., HGB/APPLICATIONS
- 18.DNA FINGER PRINTING**

A.ANBU M.SC.,B.ED.,8508429396

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 / vestigial organs
- 8.Slaient features of mutation theory
- 9.Modern synthetic theory**
- 10.Darwin finches
- 11.HARDY WEINGBERG LAW**
- 12.ORIGIN WND EVOLUTION OF MAN**

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
15. **TYPES OF BARRIERS**
16. **ANAPHYLAXIS / NORMAL CELL / CANCER CELL**
17. **DENGUE / CHIKUNGUNYA**

INTERESTING FACTS

LESSON 8

1. QUEEN OF DRUGS / **INDUSTRIAL ALCOHOL**
2. Narrow spectrum / Broad spectrum
3. Syberbug / Toddy / Zymology
4. Biodiesel / **CYCLOSPORIN A / STATIN**
5. Microbial fuel cell
6. **MICRO ORGANISMS INVOLVED IN BIOREMEDIATION**
7. **CYCLOSPORIN A / STATIN**

LESSON 9

1. **RECOMBINANT HUMAN INSULIN**
2. Human alpha lactalbumin
3. **INTERFERONS / SCID / OLIGOPOTENCY**
4. GENE THERAPY / TYPES
5. ADVANTAGES AND DISADVANTAGES OF CLONING
6. **POLYMERASE CHAIN REACTION**
7. APPLICATIONS OF PCR

A. ANBU M.SC., B.ED., 8508429396

LESSON 10

1. Bergmans / Allen's / Jordens
2. Vanthoffs rule / Phototaxis / Phototropism / photokinesis
3. Properties of water / EURYTHERMS AND STENOTHERMS
4. ACCLIMATIZATION / **PROPERTIES OF WATER**
5. NATALITY / MORTALITY

6. IMMIGRATION EMIGRATION
7. ADAPTATION AND ITS TYPES
8. R SELECTED / K SELECTED
7. POPULATION INTERACTION
8. **ANADROMOUS / CATADROMOUS**

LESSON 11

1. Types of diversity / **GENE BANK**
2. Magnitude of biodiversity
3. **SPECIES AREA RELATIONSHIP** / RIVET POPPER HYPOTHESIS
4. Causes of biodiversity LOSS
5. **Hotspots / RED DATA BOOK**
6. **Extinction / Types**
7. Biosphere reserve
NATIONAL PARK / WILDLIFE SANCTUARY
8. **INSITU & EXSITU CONSERVATION**

LESSON 12

1. BIOMAGNIFICATION OF DDT
2. EUTROPHICATION / TYPES
3. USES OF ORGANIC FERTILIZERS
4. **DEWATS / RZWT / WASTE WATER TREATMENT**
5. **MEDICAL / E / PLASTIC WASTE**
6. **ECOSAN TOILETS**
7. **AGRO CHEMICALS**
8. **EFFECTS OF AIR POLLUTION**

A. ANBU M.SC., B.ED., 8508429396

ALL THE BEST STUDENTS