

TVL12Bio

Tirunelveli District  
Common Half Yearly Examination - 2024

**Standard 12  
BIOLOGY**

Time: 3.00 Hours

**PART-I (BIO-BOTANY)  
SECTION-A**

Marks: 70  
Marks: 35**I. Choose the correct answer:****8×1=8**

- 1) Identify the correctly matched pair
 

a) Tuber - Allium cepa	b) Sucker - Pistia
c) Rhizome - Musa	d) Stolon - Zingiber
- 2) Fruit colour in squash is an example of
 

a) Recessive epistasis	b) Dominant epistasis
c) Complementary gene	d) Co-dominance
- 3) Changing the codon AGC to AGA represents
 

a) missense mutation	b) Nonsense mutation
c) frameshift mutation	d) deletion mutation
- 4) EcoRI cleaves DNA at
 

a) AGGGTT	b) GTATATC	c) GAATTC	d) TATAGC
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- 5) The time duration for sterilization process by using autoclaves is ..... minutes and the temperature is .....
 

a) 10 to 30 and 125°C	b) 15 to 30 and 121°C
c) 15 to 20 and 121°C	d) 10 to 20 and 121°C
- 6) A free living nitrogen fixing cyanobacterium which can also form symbiotic association with the water fern Azolla
 

a) Nostoc	b) Anabaena	c) Chlorella	d) Rhizobium
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- 7) Sticky glands of Boerhaavia are cleome support
 

a) Anemochory	b) Zoohory	c) Autochory	d) hydrochory
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- 8) Statement A : Coffee contains caffeine  
Statement B : Drinking coffee enhances cancer
 

a) A is correct B is wrong	b) A, B both are correct
c) A is wrong, B is correct	d) AB both are wrong

**SECTION-B****II. Answer any 4 questions:****4×2=8**

- 9) Write any two functions of Tapetum
- 10) What is back cross?
- 11) What are the materials used to grow micro organism like spirulina
- 12) What is Ozonehole
- 13) What is myrmecophily?
- 14) What is vivipary, give example

**SECTION-C****III. Answer any 3 questions: (Q.No. 18 compulsory)****3×3=9**

- 15) A detached leaf of Bryophyllum produces new plants. How?
- 16) Draw the structure of an ovule and label the parts
- 17) What is albedo effect?
- 18) Name the green house gases.
- 19) Write any three objectives of plant breeding.

**SECTION-D****III. Answer all the questions****2×5=10**

- 20) a) What is endosperm? Explain the types with diagrams  
(OR)  
b) Write the benefits and risks of genetically modified food.
- 21) a) Enumerate the anatomical adaptation of xerophytes  
(OR)  
b) Explain the Incomplete dominance with example.

**PART-I (BIO-ZOOLOGY)**  
**SECTION-A**

Marks: 35

**I. Choose the correct answer:****8×1=8**

- 1) The mode of reproduction in bacteria is by
  - a) Formation of gametes
  - b) Endospore formation
  - c) Conjugation
  - d) Zoospore formation
- 2) Find the wrongly matched pair
  - a) Bleeding phase - Fall in oestrogen and Progesterone
  - b) Follicular phase - Rise in oestrogen
  - c) Luteal phase - Rise in FSH Level
  - d) Ovulatory phase - LH Surge
- 3) Which one of the following is not a cause for infertility?
  - a) Varicocele
  - b) Ingestion of cadmium
  - c) High body fat
  - d) Tight clothing in man
- 4) Patau's Syndrome is also referred to as
  - a) 13-Trisomy
  - b) 18-Trisomy
  - c) 21-Trisomy
  - d) None of these
- 5) The term gene was coined by
  - a) Mendel
  - b) Deveries
  - c) Johansen
  - d) Valteyer
- 6) Which is the correct order of human Evolution?
  - a) Homohabilis → Homo erectus → Hominids → Homo sapiens
  - b) Hominids → Homohabilis → Homo erectus → Homo sapiens
  - c) Homo erectus → Homohabilis → Hominids → Homo sapiens
  - d) Homohabilis → Hominids → Homo erectus → Homo sapiens
- 7) Choose the correctly Match pair
  - a) Amphetamines - Stimulant
  - b) LSD - Narcotic
  - c) Heroin - Psychotropic
  - d) Benzodiazepine - Pain Killer
- 8) The purpose of biological treatment of waste water is to
  - a) Reduce BOD
  - b) Increase BOD
  - c) Reduce sedimentation
  - d) Increase Sedimentation

**SECTION-B****II. Answer any 4 questions:****4×2=8**

- 9) What is Plasmotomy?
- 10) What is Inhibin and state its functions?
- 11) What are the advantages of DNA vaccines?
- 12) State Allen's Rule
- 13) State Alpha diversity
- 14) What is Ozone depletion? How is it caused?

*Suakati**Suakations  
Dukations***SECTION-C****III. Answer any 3 questions: Q.No. 19 is compulsory.****3×3=9**

- 15) Differentiate GIFT, ZIFT
- 16) What are the applications of Karyotyping?
- 17) What is known as RNA world?
- 18) Write about the two Principles of Lamark's Theory?
- 19) What are interferons? Mention their role?

**SECTION-D****IV. Answer all the questions:****2×5=10**

- 20) a) Explain the anatomy of Testis with the help of a diagram  
**(OR)**  
b) What are the various objections to Darwinism?
- 21) a) Explain the structure of Immunoglobulin with suitable diagram  
**(OR)**  
b) Mention the advantages and disadvantages of cloning?