



V12Bio

Virudhunagar District
Common First Revision Test - January 2024

Standard 12

BIOLOGY

Marks: 70

Time: 3.00 Hrs.

Marks: 35

PART - I [BIO-BOTANY]

Section - I

8×1=8

Note: 1. Answer all the questions.

2. Choose the most appropriate answer from the given four alternatives and write the option code and the corresponding answer.

- 1) In a test cross involving F1 dihybrid cross, more parental type offspring were produced than the recombination type offspring. This indicates
 - a) Chromosomes failed to separate during meiosis
 - b) The two genes are located on two different chromosomes
 - c) The two genes are linked and present on same chromosome
 - d) Both of the characters are controlled by more than one gene
- 2) In certain organisms, the occurrence of only parental combinations is due to
 - a) linked genes are sufficiently apart
 - b) linked genes are found in the middle
 - c) linked genes exhibit crossing over
 - d) linked genes do not exhibit crossing over
- 3) The fungus which is used as a single cell protein is
 - a) Candida utilis
 - b) Alcaligenes
 - c) Cellulomonas
 - d) Spirulina
- 4) Virus free plants are developed from
 - a) Protoplast culture
 - b) Organ culture
 - c) Cell suspension culture
 - d) Meristem culture
- 5) The interaction found in orchids and lianas is
 - a) Competition
 - b) Parasitism
 - c) Predation
 - d) Commensalism
- 6) Deforestation does not lead to
 - a) soil erosion
 - b) alternation of local weather conditions
 - c) quick nutrient cycling
 - d) destruction of natural habitat weather conditions
- 7) **Match the following: Choose the correct sequence.**

i) Symbiotic N ₂ bacteria	-	a) Azotobacter
ii) Phosphate solubilizing bacteria	-	b) Amanita species
iii) Free living bacteria	-	c) Aspergillus species
iv) Phosphate mobilizing bacteria	-	d) Anabena azollae
a) i-d, ii-c, iii-b, iv-a		b) i-d, ii-c, iii-a, iv-b
c) i-b, ii-c, iii-d, iv-a		d) i-c, ii-d, iii-b, iv-a
- 8) New world species of cotton
 - a) Gossypium arboreum
 - b) G. herbaceum
 - c) G. barbadense
 - d) Both a and b

Section - II

Answer ANY FOUR of the following:

4×2=8

- 9) What is reciprocal cross? What is its conclusion?
- 10) What is synapsis? At which stage of cell division it occurs?
- 11) What is cybrid?
- 12) Draw the diagram thermal stratification.
- 13) What is community productivity?
- 14) Write a note on 'Heterosis'.

Section - III

Answer ANY THREE of the following. Q.No. 19 is compulsory:

3×3=9

- 15) What are endemic plants? Mention any three endemic plants with their centre.
- 16) Water is very essential for life. Write any three features for plants which enable them to survive in water scarce environment.
- 17) How will you identify a vector?
- 18) What are the functions of endosperm?
- 19) What is pseudo cereal? Give an example.

Section - IV

Answer all the questions:

2×5=10

- 20) a) Explain the types of ovule. (OR)
 b) Mention the application of Biotechnology.
- 21) a) What is decomposition? Explain the mechanism of decomposition. (OR)
 b) What are psychoactive drugs? Add a note on Marijuana and Opium.

PART - II [BIO-ZOOLOGY]

Marks: 35

Section - 1

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 the corresponding answer.

- 1) The animals that are at high risk of extinction due to habitat destruction is
 a) Amphibians b) Mammals c) Echinoderms d) Birds
- 2) Enzyme used for removing oily stains from the clothes
 a) Cellulase b) Pectinase c) Protease d) Lipase
- 3) The Athlete's foot disease in human is caused by
 a) Protozoa b) Virus c) Fungi d) Bacteria
- 4) Paedogenetic parthenogenesis occurs in
 a) Aphis b) Honey bees c) Solenobia d) Gall fly
- 5) Which is functionally correct order?
 a) FSH → LH → Inhibin → Spermato genesis
 b) LH → Leydig cells → Testosterone → Spermato genesis
 c) TSH → FSH → Sertoli cells → Spermato genesis
 d) LTH → Sertoli cells → Antrogen → Spermatogenesis
- 6) The first clinical gene therapy was done for the treatment of
 a) SCID b) AIDS c) Cancer d) Cystic fibrosis
- 7) **Assertion (A)** : The environmental conditions of the tropics are favourable for speciation and diversity of organisms.
Reason (R) : The climate seasons, temperature, humidity and photo period are more (or) less stable and congenial.
 a) Both A and R are true and R explains A correctly.
 b) Both A and R are true and R explains A not correctly.
 c) R is true but A is false. d) Both A and R are false.
- 8) The Neanderthal man had the brain capacity
 a) 650 - 800 cc b) 1200 cc c) 900 cc d) 1400 cc

Section - 2

Note: Answer any four of the following questions.

4×2=8

- 9) Which blood type is known as blank allele? Why is it called so?
 10) Write the difference between Eurytherms and Stenotherms organisms.
 11) What are methanogens? Where are they found?
 12) Write about vesiculase and hyaluraridase and their functions.
 13) Name any four human viral diseases.
 14) What is Lactatinal amenorrhoea?

Section - 3

Note: i) Answer any three of the following questions.

3×3=9

ii) Q.No. 19 is compulsory.

- 15) Write any three salient features of Human genome project.
 16) State whether it is safe to recycle e-waste (or) not? and explain your answer.
 17) Name the drugs which have Hallucinogenic effects.
 18) Who disapproved lamarck's theory of acquired characters? How?
 19) Write the difference between seasonal breeders and continuous breeders.

Section - 4

Note: Answer the following questions.

2×5=10

- 20) Explain the process of spermatogenesis with a suitable diagram. (OR)
 Explain the structure of Immunoglobulin with suitable diagram.
- 21) Explain the structure of RNA which plays a vital role in protein synthesis by transferring amino acids with diagram. (OR)
 List out the human activities causing biodiversity loss.