

V11Bio

Virudhunagar District Common Examinations
Common Half Yearly Examination - December 2022

Standard 11

BIOLOGY

Marks: 70

PART - I [BIO-BOTANY]

Marks: 35

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) Choose the correct statements:
 - i) Ecoli is a facultative anaerobe.
 - ii) Virusoids is a circular molecule of ssRNA without a capsid.
 - iii) Actinomycetes are also called as Ray fungi.
 - iv) Lichens growing on rocks are called as corticolous.

a) i, iii, iv b) i, iv c) i, iii d) i, ii, iii
- 2) Select the mismatch pair.
 - a) Allamanda - ternate phyllotaxy
 - b) Acalypha - leaf mosaic
 - c) Musa - uncostate
 - d) Lablab - trifoliate
- 3) Epipetalous stamens are found in the family
 - a) Liliaceae b) Fabaceae c) Euphorbiaceae d) Solanaceae
- 4) In sphase of the cell cycle
 - a) Chromosome number is increased.
 - b) Amount of DNA remains same in each cell.
 - c) Amount of DNA doubles in each cell.
 - d) Amount of DNA is reduced to half in each cell.
- 5) Of the following which one is not a feature of dicot stem?
 - a) Vascular bundles are wedge shaped.
 - b) Vascular bundles are conjoint, closed and exarch.
 - c) Cortex is differentiated into three zones.
 - d) Pith is found in the center of the stem.
- 6) Which among the following is correct?
 1. apoplast is fastest and operate in non-living part.
 2. transmembrane route includes vacuole.
 3. symplast interconnect the nearby cell through plasmadesmata.
 4. symplast and transmembrane route are in living part of the cell.

a) 1 and 2 b) 3 and 4 c) 2 and 3 d) all are correct
- 7) Which chlorophyll molecule does not have a phytol tail?
 - a) chl-a b) chl-c c) chl-d d) chl-b
- 8) In unisexual plant, sex can be changed by the application of
 - a) ABA b) Ethanol c) Auxin d) Cytokinin

Section - II

4×2=8

Answer any four of the following:

- 9) Distinguish between Leptosporangiate and Eusporangiate.
- 10) Define : Hypogynous
- 11) What are the salient features of modern cell theory?
- 12) What are properties of water?
- 13) Why is that in certain plants deficiency symptoms appear first in younger plants of the plants while in others, they do so in nature organs?
- 14) Name the enzymes involved in phosphorylation and dephosphorylation reactions in EMP pathway.

Section - III

3×3=9

Answer any three of the following. Q.No. 15 is compulsory:

- 15) Write the similarities and differences between phylloclade and cladode.
- 16) What are the significance of meiosis?
- 17) Write a note on "Quiescent centre".
- 18) If the concentration of the salt in the soil is too high and the plants may wilt even if the field is throughly irrigated. Explain.
- 19) Explain the types of seed germination.

Section - IV

2×5=10

IV. Answer all the questions:

- 20) a) Differentiate between Angiosperms and Gymnosperms.
- b) Explain the floral characters of Datura metal.

(OR)

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- 21) a) A transverse section of the trunk of a tree shows concentric rings which are known as growth rings. How are these rings formed? What are the significance of these rings? (OR)
- b) Write the physiological effects of cytokinins.

PART - II [BIO-ZOOLOGY]
Section - 1

Marks: 35

Note: 1. Answer all the questions.

8×1=8

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

- 1) Which of the following is correctly matched?
- a) Adamsia - Sea pen
b) Gorgonia - Sea anemone
c) Pennatula - Sea fan
d) Physalia - Portuguese man of war
- 2) The location and numbers of mapighian tubules in periplaneta
- a) At the junction of midgut and hindgut, about 150.
b) At the junction of foregut and midgut, about 150.
c) Surrounding gizzard - 8.
d) At the junction of colon and rectum - 8.
- 3) When 1500 ml air is in the lungs, it is called
- a) residual volume
b) tidal volume
c) vital capacity
d) inspiratory reserve volume
- 4) Aquaponics is a technique which is
- a) A combination of aquaculture and fish culture.
b) A combination of aquaculture and hydroponics.
c) A combination of vermiculture and hydroponics.
d) A combination of aquaculture and prawn culture.
- 5) Which of the given option shows all wrong statements for thyroid gland statements?
- i) It inhibits process of RBC formation.
ii) It helps in maintenance of water and electrolytes.
iii) Its more secretion can reduce blood pressure.
iv) It stimulates oteoblast.
- a) (i) and (ii) b) (iii) and (iv) c) (i) and (iv) d) (i) and (iii)
- 6) Acetabulum is located in
- a) collar bone b) hip bone c) shoulder bone d) thigh bone
- 7) Match the following human spinal nerves in column I with their respective number in column II and choose the correct option:
- | Column I | Column II |
|--------------------|----------------|
| P. Cervical nerves | - i) 5 pairs |
| Q. Thoracic nerves | - ii) 1 pair |
| R. Lumber nerve | - iii) 12 pair |
| S. Coccygeal nerve | - iv) 8 pair |
- 8) The hormone which helps in the reabsorption of water in kidney tubules is
- a) cholecystokinin b) angiotensin II
c) antidiuretic hormone d) pancreozymin

Section - 2

Note: Answer any 4 of questions. Question No. 14 is compulsory.

4×2=8

- 9) Define Species.
10) List the unique features of birds endoskeleton.
11) Write the peculiar characters of duck.
12) Write the symptoms of cretinism.
13) What are the heart sounds? When and how are these sounds produced?
14) What are the Refractive Error of Human eye?

Section - 3

Note: Answer any 3 of questions. Question No. 19 is compulsory.

3×3=9

- 15) List three features that characteristic bony fishes.
16) Apart from bile secretion, the liver also performs several functions write only three functions.
17) How the body makes long term adjustments when living in high altitude?
18) Give the economic importance of silkworm.
19) Why the limbic system is called the emotional brain? Name the parts of it.

Section - 4

Note: Answer all the questions.

2×5=10

- 20) List the characteristic features that distinguish cartilaginous fishes with living jawless fishes. (OR)
Differences between male and female cockroach.
21) "Sarcomere is a structural and functional unit of muscle" - Justify this statement. (OR)
Discuss the various techniques adopted in cattle breeding.