

**Standard 11**

Time Allowed: 3.00 Hours

**BIOLOGY**

Maximum Marks: 70

**PART - I [BIO-BOTANY]****Marks: 35****Section - A****I. Answer the following questions:****8×1=8**

- 1) Identify the Archaeobacterium
  - a) Acetobacter
  - b) Erwinia
  - c) Treponema
  - d) Methanobacterium
- 2) Bicollateral vascular bundles are present in
  - a) Cucurbitaceae
  - b) Liliaceae
  - c) Dracaena
  - d) Yucca
- 3) Which chlorophyll molecule does not have a phytol tail?
  - a) Chl-a
  - b) Chl-b
  - c) Chl-c
  - d) Chl-d
- 4) \_\_\_\_\_ is the powerful growth inhibitor.
  - a) Ethylene
  - b) Cytokinin
  - c) ABA
  - d) Auxin
- 5) The compound which links Glycolysis and Krebs's cycle is
  - a) Succinic acid
  - b) Pyruvic acid
  - c) Acetyl CoA
  - d) Citric acid
- 6) Which of the following is a polycarpic plant?
  - a) Mangifera
  - b) Bambusa
  - c) Musa
  - d) Agave
- 7) Major site for the synthesis of lipids
  - a) RER
  - b) SER
  - c) Centriole
  - d) Lysosome
- 8) The water potential of pure water is
  - a) less than zero
  - b) more than zero
  - c) more than one
  - d) zero

**Section - B****II. Answer any 4 questions. Q.no. 10 is compulsory:****4×2=8**

- 9) Plant (A) in a nutrient medium shows whiptail disease, plant (B) in a nutrient medium shows a little leaf disease. Identify mineral deficiency of plant (A) and (B).
- 10) Draw and label a diagram of lampbrush chromosome.
- 11) What do you infer from the term pycnoxylic?
- 12) Write a floral formula of Allium Cepa.
- 13) Differentiate Morus and Pinus wood.
- 14) Explain the term PCD.

**Section - C****III. Answer any 3 questions. Q.no. 19 is compulsory:****3×3=9**

- 15) List out the properties of water.
- 16) Differentiate Aggregate and Multiple fruit.
- 17) Mention the importance of Mycorrhizae.
- 18) Write any 3 significance of Mitosis.
- 19) Respiratory Quotient is zero in succulent plants. Why?

**Section - D****IV. Answer the following questions:****2×5=10**

- 20) a) Differentiate Cyclic and Non cyclic photophosphorylation.

**(OR)**

- b) Draw the alternate pathway of glucose break down.

- 21) a) Write the floral characters of clitoria ternatea.

**(OR)**

- b) What are the physiological effects of gaseous hormone?



## Section - I

## I. Answer all the questions:

8×1=8

- 1) In which of the following organisms, self fertilization is seen  
a) Fish                      b) Roundworm                      c) Earthworm                      d) Liver fluke
- 2) What type of fibres are found in connective tissue matrix?  
a) Collagen                      b) Areolar                      c) Cartilage                      d) Tubular
- 3) The location and numbers of malpighian tubules in Periplaneta.  
a) At the junction of foregut and midgut about 150.  
b) At the junction of midgut and hindgut about 150.  
c) Surrounding gizzard 150.  
d) At the junction of colon and rectum 150.
- 4) Which of the following combinations are not matched?  

| Column I                    | Column II             |
|-----------------------------|-----------------------|
| a) Bilirubin and Biliverdin | - i) Intestinal Juice |
| b) Hydrolysis of starch     | - ii) Amylases        |
| c) Digestion of fat         | - iii) Lipases        |
| d) Salivary gland           | - iv) Parotid         |
- 5) At the venous end of the capillary bed the osmotic pressure is  
a) Greater than the hydrostatic pressure.  
b) Result in net absorption of fluids.  
c) Result in not outflow of fluids.  
d) No change occurs.
- 6) Ornithine cycle takes place in  
a) Heart                      b) Kidney                      c) Spleen                      d) Liver
- 7) Acetabulum is located in  
a) collar bone                      b) hip bone                      c) shoulder bone                      d) thigh bone
- 8) When the potential across the axon membrane is more negative than the normal resting potential, the neuron said to be in a state of  
a) Depolarization                      b) Hyperpolarization  
c) Repolarization                      d) Hypopolarization

## Section - II

## II. Answer any four of the following questions:

4×2=8

- 9) Some epithelia are pseudostratified. What does this mean?
- 10) Comment on the functions of alary muscles.
- 11) What is diphyodont?
- 12) What is cardiac cycle? Mention its duration.
- 13) Name the three main hormones involved in the regulation of the renal function.
- 14) How the rigor mortis happened?

## Section - III

## III. Answer any three of the following questions:

3×3=9

Q.No. 19 is compulsory.

- 15) Compare closed and opened circulatory system.
- 16) Write about autoimmune connective tissue disorders.
- 17) Differentiate rod cells from cone cells.
- 18) Compare protonephridia from metanephridia.
- 19) i) Find the BMI of a person having 62 kg of weight and 1.7m height.  
ii) Draw the different types of WBC.

## Section - IV

## IV. Answer all the questions:

2×5=10

- 20) a) Write down the rules of nomenclature.  
(OR)  
b) Make a schematic representation of blood coagulation process.
- 21) a) Comment on the functions of adrenalin.  
(OR)  
b) Discuss the various techniques adopted in cattle breeding.