

Total number of printed pages : 3

2020/XI/BIO

**2020
BIOLOGY**

Total marks : 70

Time : 3 hours

General instructions:

- i) *Approximately 15 minutes is allotted to read the question paper and revise the answers.*
- ii) *All questions are compulsory. Marks are indicated against each question.*
- iii) *The question paper consists of two parts – Part A and Part B. Each part contain 14 questions.*
- iv) *Internal choice has been provided in some questions.*
- v) *Write the answers of Part A and Part B in separate answer books. Marks shall not be awarded if the answers of both the Parts are written in one book nor marks awarded if answers of Part A are written in the answer book of Part B and vice-versa.*

N.B: *Check that all pages of the question paper is complete as indicated on the top left side.*

PART - A

1. Taxonomical aid used for identification of plants and animals based on similarities and dissimilarities is called **1**
(a) Taxon (b) Herbarium
(c) Key (d) Taxa
2. The arrangement of axonemal microtubules is referred to as the **1**
(a) 9+1 array (b) 9+2 array
(c) 9+3 array (d) 9+4 array
3. The opening and closing of stomata is controlled by the **1**
(a) amount of CO₂ in atmosphere
(b) amount of O₂ in atmosphere
(c) turgidity of guard cells
(d) number of guard cells
4. Necrosis or death of leaf tissue is a deficiency symptom of **1**
(a) zinc (b) sulphur
(c) copper (d) iron
5. The factor responsible for apical dominance in most higher plants is **1**
(a) auxin (b) cytokinin
(c) ethylene (d) abscisic acid
6. Define inflorescence. Mention the two major types of inflorescence. **2**
7. What is ER? Name the different type of ER. **2**

8. What is chemiosmotic hypothesis? 2
9. What are the general characteristics of algae? 3
10. a. Differentiate between heartwood and sapwood. 3
Or
b. Write three points of differences between parenchyma tissue and collenchyma tissue.
11. What is hydroponics? Write its two importance. 3
12. a. Describe the structure of nucleus with the help of a labelled diagram. 5
Or
b. Describe the structure of chloroplast with a neatly labelled diagram.
13. a. What is diffusion? Explain in detail the facilitated mode of diffusion in the movement of substances in plants. 5
Or
b. Discuss the five recognized groups of plant growth regulators.
14. a. Explain the Calvin cycle with the help of schematic representation. 5
Or
b. Give the schematic representation of an overall view of citric acid cycle.

PART –B

1. Five kingdom classification was proposed by 1
(a) Aristotle (b) Linnaeus
(c) Darwin (d) R.H Whittaker
2. The largest phylum of Animalia is _____ 1
(a) Arthropoda (b) Annelida
(c) Mollusca (d) Aschelminthes
3. Which one of the following is not a pigment? 1
(a) Carotenoids (b) Chlorophyll
(c) Anthocyanin (d) Cellulose
4. The largest gland in the human body is 1
(a) pancreas (b) duodenum
(c) liver (d) gall bladder
5. The pineal gland secretes a hormone called 1
(a) melatonin (b) thyroxine
(c) calcitonin (d) growth hormone

6. Write four characteristic features of the class Aves. 2
7. Name the four types of animal tissues. 2
8. Why is meiosis important? 2
9. Draw a neat labelled diagram of alimentary canal of cockroach. 3
10. **a.** How is respiration regulated? Explain briefly. 3
Or
b. Describe briefly the double circulatory system in human beings.
11. Explain in brief the mechanism of hearing. 3
12. **a.** What are the factors affecting enzyme action? Explain in brief. 5
Or
b. Why is mitosis known as equational division? Briefly explain the different stages of mitosis.
13. **a.** Define cardiac cycle. Explain the various steps involved in cardiac cycle. 5
Or
b. Explain the internal structure of kidney.
14. **a.** Explain the mechanism of muscle contraction. 5
Or
b. Describe the mechanism of hormone action.