

Biology	9th, Gujranwala Board, 2015	Group - I
Time: 2.45 hours	Subjective	Marks = 63

Note: Section I is compulsory. Attempt any three questions from Section II and attempt any two parts from section III.

Section-I

2. Write short answers to any Six (6) questions : 12

- i** Differentiate between Physiology and Morphology.
- ii** What is meant by biocoenosis? What is their number?
- iii** What is meant by observations? Write their types.
- iv** What is meant by hypothesis?
- v** Define endangered species.
- vi** Name three endangered species in Pakistan.
- vii** Differentiate between blebs and apoptotic bodies.
- viii** Define meiosis.
- ix** When and where was the first microscope made?

3. Write short answers to any Five (5) questions : 10

- i** Define turgor.
- ii** Differentiate between cell membrane and plasma membrane.
- iii** Define metabolism.
- iv** Give one example for each intracellular and extracellular enzyme.
- v** What is a cofactor?
- vi** Define Bioenergetics.
- vii** What does FAD stand for?
- viii** Write the role of phosphorus and zinc in plants.

4. Write short answers to any Five (5) questions : 10

- i** What are the causes of anaemia and goiter diseases in man?
- ii** Write the names of two juices secreted in small intestine of man.
- iii** Write the role of dietary fibres in human diet.
- iv** Define transpiration.
- v** How transport of food occurs in plants?
- vi** What is meant by human blood plasma?
- vii** Write a short note on "Thalasassaemia".
- viii** Differentiate between arteries and veins.

Section-II

5. (a) Describe general characteristics of five kingdom system as proposed by Margulis and Schwartz. 3

(b) Write down the contributions of Jabir Bin Hayan, Abdul Malik Asmai and Bu Ali Sina in the field of Biology. 4

6. (a) Describe the structure of cell wall. 3

(b) What are Plastids? Explain its three types. 4

7. (a) Write characteristics of enzyme. 3

(b) Explain four phases of nucleus division. 4

8. (a) Describe any three effects of Malnutrition on humans. 3

(b) Write a note on Organic Fertilizers and describe their importance. 4

9. (a) What is photosynthesis? Write its balanced equation. 3

(b) Explain the factors affecting the rate of transpiration. 4

Section-III

10.a (i) You observed star fish. Draw its diagram. Also write its two characteristics. 3

(ii) You observed earth worm. Draw its diagram. 2

b (i) You have observed in laboratory with the help of experiment that carbon dioxide is necessary for photosynthesis. Write the procedure of this experiment. 3

(ii) You have studied that carbon dioxide is necessary for photosynthesis. Write the material used in this experiment. 2

c (i) You observed "Biuret Test" for protein. Write down its procedure. 3

(ii) You observed "Biuret Test" for protein. Write the material used in this test. 2