BIOLOGY 2019

Time: 2 ½ Hours   Max. Marks: 67

SECTION B (SHORT-ANSWER QUESTIONS)(40)

NOTE: Attempt 8 questions from this Section.

2. Draw a neat and labeled diagram of dorsal view of heart of frog.
3. Taking case of malaria, explain the following biological method: (i) Observation (ii) Experiment (iii) Hypothesis (iv) Deduction (v) Result
4. What changes did Margulis and Schwartz suggest in Whittaker's Scheme? Explain their all suggested kingdom.
5. Explain five factors affecting the rate of transpiration.
6. Define uoints. Write two defects of skeletal system.
7. State Lamarck's theory of evolution giving example of Snake. OR Giraffe.
8. Discuss why viruses are considered as living organisms and which characteristics differentiated them from living organisms?
9. Write five differences between Angiosperm and Gymnosperm plants.
10. Write down five points on the importance of Fungi.
11. Name the five hormones of plants. Briefly explain any two of them.
12. Define: (i) Tracheophytes (ii) Plastids (iii) Osmosis (iv) Producers (v) Photosynthesis
13. Draw a neat and labeled diagram of T.S. of Brassica Root.

SECTION C (DETAILED-ANSWER QUESTIONS)(27)

NOTE: Attempt 3 questions from this Section.

14.(a) Draw a neat and labeled diagram of Arterial system of frog OR L.S of human kidney.
(b) Describe four types of bacteria according to shapes.
15.(a) Describe different types of teeth in human body with their functions. Write dental formula also.
(b) Describe any two methods of dispersal of fruits & seeds.
16.(a) Draw a neat and labeled diagram of the Human Respiratory Organs.
(b) What do you mean by asexual reproduction? Describe any one method of asexual reproduction in plants.
17.(a) What are antibiotics? Describe their four types.
(b) Describe structure of neuron with the functions of its all parts. (Diagram is not required)
18.(a) Explain flora of Pakistan on following basis:
(i) Forests (ii) Food crops (iii) Aquatic plants (iv) Fruit bearing trees (v) Ornamental trees.
(b) Write down four characteristics of Phylum Echinodermata