

PART - I**Q.2 Write short answers to any Five (5) questions: 10**

- i Define bioeconomics.
- ii State about Bu Ali Sina achievements in Biology.
- iii What is biosphere level.
- iv Define scientific method.
- v Write two characteristics of hypothesis.
- vi Define incubation period.
- vii Differentiate between sieve tubes cells and companion cells.
- viii Define active transport.

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

- i Define systematics.
- ii Write two aims of classification.
- iii Differentiate between karyokinesis and cytokinesis.
- iv How phragmoplast is formed in plant cell?
- v How mitosis helps in cell replacement of body?
- vi What is meant by tetrad?
- vii How photosynthesis gets effected by temperature?
- viii Why it is incorrect to say that the energy releasing step of respiration is electron transport chain?

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

- i How enzymes are used as biological detergent?
- ii What does saturation of active sites mean?
- iii Define "Lock & Key Model" of enzymes.
- iv Why vitamin C is important?
- v Define peristalsis.
- vi What is "Cohesion Tension Theory"?
- vii Define arteries and veins.
- viii Write the effects of dengue fever on platelets.

PART-II**Note: Attempt any TWO questions.**

- Q.5(a)** Define biology and explain its three main divisions. 5
- (b)** Write a note on Golgi apparatus and Lysosome. 4
- Q.6(a)** Define endangered species and discuss any three types of endangered species in Pakistan. 5
- (b)** Write a note on aerobic and anaerobic respiration. 4
- Q.7(a)** Describe complete digestion in small intestine. 5
- (b)** Write a detailed note on blood plasma. 4