

Sahiwal Board 2021

Class 9th

Biology

Group - I

- 1.1. Length of Human Oesophagus is about:
 - A. 10cm
 - B. 12cm
 - C. 20cm
 - D. 25cm

2. During cytokinesis in plant cells phragmoplast formed from:
 - A. Nuclear membrane
 - B. Chloroplast
 - C. Mitochondria
 - D. Golgi vesicles

3. Induced Fit model was proposed by:
 - A. Aristotle
 - B. Robert Whittaker
 - C. Daniel Koshland
 - D. Emil Fischer

4. One gram Carbohydrates contain _____ energy.
 - A. 03 kcal
 - B. 04 kcal
 - C. 05 kcal
 - D. 06 kcal

5. In 1937 the terms "Procariotique" and "Eucariotique" were suggested by:

- A. Robert Whittaker
- B. E. Chatton
- C. Margulis
- D. Schwatz

6. Freezing point of water is:

- A. 100° C
- B. 90° C
- C. 20° C
- D. 0° C

7. All membranes of cell are called:

- A. Nuclear membrane
- B. Plasma membrane
- C. Cell wall
- D. Cell membrane

8. Volume of plasma in the blood is:

- A. 40%
- B. 45%
- C. 55%
- D. 60%

9. Study of internal structure of organism is called:

- A. Biology
- B. Morphology
- C. Botany
- D. Anatomy

10. Some plants open their Stomata during night when water stress is:
- A. more
 - B. less
 - C. equal
 - D. no
11. Typically interphase lasts for at least _____ percent of total time requires for cell cycle.
- A. 90
 - B. 80
 - C. 70
 - D. 60
12. Another name of Dark Reaction of Photosynthesis is:
- A. Water cycle
 - B. Nitrogen cycle
 - C. Carbon cycle
 - D. Calvin cycle

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Q2. Write short answers to any FIVE (5) questions: **10**

- i. What do you know about parasites and Parasitology?
- ii. Define Tissue and write down its two types.
- iii. Write scientific names of Mustard plant and frog.
- iv. What are biological method and biological problem?
- v. What is meant by Reporting the Results?
- vi. Why data analysis is necessary? How is it done?
- vii. Write two functions of Golgi apparatus.
- viii. What are functions of chromoplast and leucoplasts?

Q3. Write short answers to any FIVE (5) questions.: **10**

- i. Define Systematics.
- ii. What are aims of classification?
- iii. Differentiate between Proton and Viroid.
- iv. Write names of two major phases of cell cycle.
- v. Define Mitosis.
- vi. What is Chiasmata?
- vii. When and who discovered ATP?
- viii. Define Osmosis.

Q4. Write short answers to any FIVE (5) questions.: **10**

- i. Write induced Fit model of Enzyme Action.
- ii. Define inhibitors and Activators.
- iii. Are all enzymes made up of amino acids?
- iv. What are the symptoms of dengue fever?
- v. Write any two role of liver.
- vi. Write the sources of vitamin "A".

- vii. Define Blood.
- viii. How is plasma separated from blood?

Section - II

Each question carries Nine marks.

(4+5=9)

- Q5. (a) Describe organelle and cell level.
(b) Describe the structure and functions of Cell Membrane.
- Q6. (a) Write a note on taxonomic hierarchy.
(b) Differentiate between Photosynthesis and respiration.
- Q7. (a) Describe in detail the digestion of food in stomach.
(b) Write a note on Atherosclerosis and Arteriosclerosis.

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Biology

Group - II

Q2. Write short answers to any FIVE (5) questions: **10**

- i. Define Bioelement and Biomolecule.
- ii. Define Biology and Zoology.
- iii. What is meant by biosphere level?
- iv. Write the names of steps of Biological Problems.
- v. What is meant by Reporting the Results?
- vi. When a biologist adopts a biological method?
- vii. Define Turgor Pressure.
- viii. What is Facilitated Diffusion?

Q3. Write short answers to any FIVE (5) questions.: **10**

- i. Define Biodiversity.
- ii. Write down scientific name of pea and sea star.
- iii. How algae differ from plants? Write two points.
- iv. What happens in G-2 phase of cell cycle?
- v. What changes occur in cell during Anaphase of Mitosis?
- vi. What is the difference between dipole and haploid cell?
- vii. Define Oxidation and Reduction.
- viii. What is meant by Aicoholic Fermentation?

Q4. Write short answers to any FIVE (5) questions.: **10**

- i. Define Coenzyme.
- ii. How enzymes lower the activation energy?
- iii. Define Anabolism.
- iv. Write any two functions of Vitamin "C".
- v. What is Bolus?
- vi. What is Pus? How is it formed?

- vii. What is Transpiration Pull?
- viii. Write preventive measures of dengue fever.

Section - II

Each question carries Nine marks.

(4+5=9)

- Q5. (a) Describe in detail organ and organ system level.
(b) What do you know about mitochondria? Describe its structure and function.
- Q6. (a) Write a detailed note on taxonomic hierarchy.
(b) Write the difference between aerobic and anaerobic respiration.
- Q7. (a) Describe the role of water and dietary fibre in our life.
(b) Explain transport of food with reference to the theory of Pressure-flow mechanism.