

# Lahore Board 2021

## Class 9<sup>th</sup>

## Biology

## Group - I

1. Term metabolism is derived from Greek word meaning:
  - a. Smaller
  - b. Change
  - c. Growth
  - d. Energy
2. Outside the conducting tissues there is a narrow layer of cells called:
  - a. Endodermis
  - b. Pericycle
  - c. Cortex
  - d. Epidermal
3. What is the function of mitochondrion?
  - a. Lipid storage
  - b. Protein synthesis
  - c. photosynthesis
  - d. Cellular respiration
4. Which mineral is used for blood clotting:
  - a. Potassium
  - b. Chloride
  - c. Sodium
  - d. Calcium
5. The opening between right atrium and right ventricle is guarded by:
  - a. Tricuspid valve
  - b. Bicuspid valve
  - c. Pulmonary semilunar valve
  - d. Aortic semilunar valve

6. The level of organization that is less define in plants is:
  - a. Organism level
  - b. Organ level
  - c. Organ system level
  - d. Tissue level
7. If tumor remain in their original location are called:
  - a. Malignant tumors
  - b. Metastasis
  - c. Bengin tumors
  - d. Cancerous tumors
8. A litre of ethanol weights \_\_\_\_\_grams:
  - a. 1000
  - b. 789
  - c. 879
  - d. 978
9. ATP was discovered in:
  - a. 1939
  - b. 1941
  - c. 1949
  - d. 1929
10. Which phase lasts for at least 90% of the total volume for cell cycle:
  - a. Inter phase
  - b. Karyokinesis
  - c. Cytokinesis
  - d. Prophase
11. The terms prokaryotic and eukaryotic was first suggested by:
  - a. E-Chatton
  - b. Robbert Whittaker
  - c. Ernst Hackel

d. Margulis

12. Where are villi found:

a. Esophagus

b. Stomach

c. Small intestine

d. Large intestine

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## Biology

## Group - II

1. Fluid-mosaic model explain the structure of:
  - a. Nucleus
  - b. Cell wall
  - c. Cytoplasm
  - d. Cell membrane
2. In human oesophagus is about \_\_\_\_\_ long:
  - a. 10cm
  - b. 15cm
  - c. 20cm
  - d. 25cm
3. To what category of molecules do enzymes belong:
  - a. Carbohydrates
  - b. Lipids
  - c. Proteins
  - d. Nucleic acid
4. In which biological method “if and then” logic is used?
  - a. Hypothesis
  - b. Observations
  - c. Deduction
  - d. Experimentation
5. In cellular respiration food is oxidized to:
  - a. O<sub>2</sub>
  - b. CO<sub>2</sub>
  - c. H<sub>2</sub>

- d. Water
6. A cubic millimeter of blood contains \_\_RBCs in males:
- a. 5.5 million
  - b. 4.5 million
  - c. 6.5 million
  - d. 7.5 million
7. Scientific name of house crow is
- a. *Allium Cepa*
  - b. *Corvus splendens*
  - c. *Asterias rubens*
  - d. *Brassica campestris*
8. Crossing over was observed in the year\_\_\_\_\_:
- a. 1911
  - b. 1937
  - c. 1943
  - d. 1951
9. During which phase of mitosis spindles are formed:
- a. Telophase
  - b. Prophase
  - c. Metaphase
  - d. Anaphase
10. Normal pH of blood is:
- a. 7.4
  - b. 6.4
  - c. 8.4
  - d. 11.4
11. It is the study of insects:
- a. Entomology
  - b. Immunology

- c. Pharmacology
  - d. Socio biology
12. Citrus fruits, green vegetables, beef liver are the source of:
- a. Vitamin A
  - b. Vitamin B
  - c. Vitamin C
  - d. Vitamin D

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## Biology

## Group - I

### Q # 2: Write short answers to any five (5) questions:

- i. What is meant by molecular biology?
- ii. What is tissue level? Give one example.
- iii. Define biotechnology.
- iv. What are qualitative observation? Given examples.
- v. What is meant by control group in experiment?
- vi. What is meant by summarization of results?
- vii. What are ribosomes? Write down their functions.
- viii. What is reverse osmosis?

### Q # 3: Write short answers to any five (5) questions:

- i. Write characteristics of algae and protozoans.
- ii. Differentiate between autotrophs and heterotrophs.
- iii. What is meant by binomial nomenclature?
- iv. Differentiate between Karyokinesis and cytokinesis.
- v. What is regeneration? Give example.
- vi. What is meant by diploid cell and haploid cell?
- vii. Define anaerobic respiration and write the name of their types.
- viii. Differentiate between oxidation and reduction.

### Q # 4: Write short answers to any five (5) questions:

- i. Define activation energy.
- ii. Differentiate between anabolism and catabolism.
- iii. What are prosthetic group?
- iv. Write any two symptoms due to deficiency of vitamin C.
- v. What is peristalsis?
- vi. Define the terms systole and diastole.

- vii. What is pus? How it is formed?
- viii. What are preventive measures of dengue fever?

### **Part-II**

**Note: Attempt any two Questions.**

- 5: (a) Write in detail population and community levels. 4
- (b) Write a detailed note on cell membrane. 5
- 6: (a) Describe importance of biodiversity. 4
- (b) Define dark reaction and write the summary of events of dark reactions. 5
- 7: (a) Write brief notes in carbohydrates and proteins. 4
- (b) Define cardiovascular disorders and explain myocardial infarction in detail. 5



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### Biology

### Group - II

**Q # 2: Write short answers to any five (5) questions:** **10**

- i. Define tissues and give example.
- ii. Differentiate between morphology and anatomy.
- iii. What is population level?
- iv. Define biological method.
- v. Differentiate between control group or experimental group.
- vi. Define scientific law.
- vii. Differentiate between cell membrane and plasma membrane.
- viii. What is cytoplasm?

**Q # 3: Write short answers to any five (5) questions:** **10**

- i. Define taxa. Write name of any two taxa.
- ii. Write two characteristics of kingdom fungi.
- iii. Define binomial nomenclature.
- iv. Define chiasmata.
- v. Write any two significance of mitosis.
- vi. Define bivalent why it is called tetrad?
- vii. Sketch molecular structure of ATP.
- viii. What products are produced during photosynthesis?

**Q # 4: Write short answers to any five (5) questions:** **10**

- i. What is active site?
- ii. Define substrate and product.
- iii. Write two characteristics of enzymes.
- iv. What are saturated fatty acids? Give their drawbacks.
- v. What chyme?
- vi. What is the function of root in plants?

vii. What is mass and size of heart in a normal adult man?

viii. What are symptoms of dengue fever.

## Part-II

**Note: Attempt any two Questions.**

- 5: (a) Define biology and write its major divisions. 4  
(b) What are plastids? Write its types. 5
- 6: (a) Describe in detail characteristics of kingdom monera and kingdom Protista. 4  
(b) Describe differences between photosynthesis and respiration. 5
- 7: (a) What is oral cavity? Explain its important functions in the process of digestion. 4  
(b) Draw comparison of veins and capillaries. 5