

# Rawalpindi BOARD

## GRADE 9

### BIO

## 2019 GROUP 1

#### Section-A (MCQs)

i) The most important photosynthetic pigment is: (Mark 1)

- A. Chlorophyll
- B. Carotenoids
- C. Xanthophyll
- D. Phthalocyanine

Answer:

- A. Chlorophyll

ii) One gram lipids contains energy. (Mark 1)

- A. 08 K.Cal
- B. 05 K.Cal
- C. 09 K.Cal
- D. 06 K.Cal

Answer:

- C. 09 K.Cal

iii) About what percentage of our population is diabetic? (Mark 1)

- A. 9%
- B. 10%
- C. 12%
- D. 20%

Answer:

- B. 10%

iv) In normal adult the mass of heart is: (Mark 1)

- A. 200-300g
- B. 250-350g
- C. 350-400g
- D. 300-350g

Answer:

- B. 250-350g

v) Which of these major bio-elements is in the highest percentage of protoplasm?  
(Mark 1)

- A. Nitrogen
- B. Hydrogen
- C. Calcium
- D. Oxygen

Answer:

- D. Oxygen

vi) The part of earth inhabited by organisms communities is known as:  
(Mark 1)

- A. Ecosystem
- B. Atmosphere
- C. Biosphere
- D. Population

Answer:

- C. Biosphere

vii) The basic step of biological method is: (Mark 1)

- A. Experiments
- B. Observations
- C. Theory
- D. Deduction

Answer:

- A. Experiments

viii) Scientific name of star fish (Sea star) is: (Mark 1)

- A. *Corvus splendens*
- B. *Allium cepa*
- C. *Asterias rubens*
- D. *Gymnothorax mordax*

Answer:

- C. *Asterias rubens*

ix) Chemical present in the cell wall of plant is: (Mark 1)

- A. Lignin

B. Cellulose

C. Chitin

D. Pectin

Answer:

B. Cellulose

x) In 1974 Noble Prize for Physiology and medicines won by: (Mark 1)

A. Louis Pasteur

B. Edward Jenner

C. Rene de Due

D. Robert Brown

Answer:

C. Rene de Due

xi) In 1876 meiosis was discovered by: (Mark 1)

A. Walther Flemming

B. Oscar Hertwig

C. Thomas Hunt Morgan

D. August Weismann

Answer:

B. Oscar Hertwig

xii) Lock & key model of enzyme action was proposed by: (Mark 1)

A. Wilhelm Kuhne

B. Daniel Koshland

C. Emil Fischer

D. Ibn-Nafees

Answer:

C. Emil Fischer

Q.2 i) What is Biogeography? (Marks 2)

Q.2 ii) Differentiate between population and community. (Marks 2)

Q.2 iii) What are qualitative observations? Give an example. (Marks 2)

Q.2 iv) What are deductions? (Marks 2)

Q.2 v) Write the scientific name of onion and pea? (Marks 2)

Q.2 vi) State the principles of binomial nomenclature. (Marks 2)

Q.2 vii) What is meant by collenchyma tissue? (Marks 2)

Q.2 viii) Differentiate between phagocytosis and pinocytosis.  
(Marks 2)

Q.3 i) Define "Meiosis". (Marks 2)

Q.3 ii) What is Phragmoplast? (Marks 2)

Q.3 iii) Differentiate between apoptosis and necrosis. (Marks 2)

Q.3 iv) What are bio-catalysts? (Marks 2)

Q.3 v) What is meant by active site of an enzyme? (Marks 2)

Q.3 vi) What is the role of ATP in the function of cell? (Marks 2)

Q.3 vii) What is meant by light reaction? (Marks 2)

Q.3 viii) Define lactic acid fermentation. (Marks 2)

Q.4 i) Write the role of potassium in plant life? (Marks 2)

Q.4 ii) Define organic fertilizer and give example. (Marks 2)

Q.4 iii) What is difference between pepsin and pepsinogen? (Marks 2)

Q.4 iv) Write four sources to get protein. (Marks 2)

Q.4 v) Write the function of root hairs. (Marks 2)

Q.4 vi) Write the reasons for transpiration pull. (Marks 2)

Q.4 vii) Define pressure flow mechanism. (Marks 2)

Q.4 viii) Write preventive measures for dengue fever. (Marks 2)

Q.5 a) Define any five divisions of Biology. (Marks 5)

Q.5 b) Explain the structure of cell membrane. (Marks 4)

Q.6 a) Describe the factors which affect the rate of enzyme action.  
(Marks 5)

Q.6 b) Describe the mechanism of respiration. (Marks 4)

Q.7 a) Write down the importance of fertilizers. (Marks 5)

Q.7 b) Write down the detail of disorders of blood. (Marks 4)

Q.7 b) Write down the detail of disorders of blood. (Marks 4)

# Rawalpindi BOARD

## GRADE 9

### BIO

## 2019 GROUP 2

Group B

Section-A (MCQs)

i) In most plants, food is transported in the form of: (Mark 1)

- A. Glucose
- B. Sucrose
- C. Sugars
- D. NADH

Answer:

B. Sucrose

ii) Which chamber has thickest walls in human heart? (Mark 1)

- A. Right ventricle
- B. Left atrium
- C. Left ventricle
- D. Right atrium

Answer:

C. Left ventricle

iii) Scientific study of animals is called. (Mark 1)

- A. Botany
- B. Morphology
- C. Histology
- D. Zoology

Answer:

D. Zoology

iv) The author of the book "Al-Qanun-fil-Tib" is: (Mark 1)

- A. Ibn-e-Nafees
- B. Bu Ali Sina
- C. Jabir bin Hayan
- D. Abdul Malik Asmai

Answer:

B. Bu Ali Sina

v) Those hypothesis that stand the test of time and never rejected.  
(Mark 1)

- A. Law
- B. Deductions
- C. Theories
- D. Observations

Answer:

C. Theories

vi) In binomial nomenclature the first letter of the \_\_\_\_\_ name is capitalized.  
(Mark 1)



- A. Species
- B. Family
- C. Genus
- D. Both A and C

Answer:

- C. Genus

vii) Ribosomes are produced in

(Mark 1)

- A. Cytoplasm
- B. RNA
- C. Nucleus
- D. Nucleolus

Answer:

- D. Nucleolus

viii) Colourless plastids are called:

(Mark 1)

- A. Chromoplast
- B. Chloroplast
- C. Leucoplast
- D. None of these

Answer:

- C. Leucoplast

ix) Cells which form the body of organism are called:

(Mark 1)

- A. Somatic cells

B. Daughter cells

C. Germ cells

D. Parent cells

Answer:

A. Somatic cells

x) Enzyme involved in break down of starch is:

(Mark 1)

A. Lactase

B. Amylase

C. Cellulase

D. Glucagon

Answer:

B. Amylase

xi) Process of glycolysis occurs in:

(Mark 1)

A. Nucleus

B. Endoplasmic reticulum

C. Cytoplasm

D. Mitochondria

Answer:

C. Cytoplasm

xii) In stomach, pepsinogen is converted into:

(Mark 1)

A. Pepsin

B. Peptides

C. Proteins

D. Pectin

Answer:

A. Pepsin

- Q.2 i) Differentiate between Microbiology and Morphology. (Marks 2)
- Q.2 ii) Define genetics. (Marks 2)
- Q.2 iii) Write two characteristics of a good hypothesis. (Marks 2)
- Q.2 iv) Define Bio informatics. (Marks 2)
- Q.2 v) Define systematics. (Marks 2)
- Q.2 vi) What is meant by Biodiversity? (Marks 2)
- Q.2 vii) Write the names of types of electron microscope. (Marks 2)
- Q.2 viii) Write the difference between the primary cell wall and secondary cell wall. (Marks 2)
- Q.3 i) What is meant by cell cycle? (Marks 2)
- Q.3 ii) Define mitosis. (Marks 2)
- Q.3 iii) What is the role of lysosome in necrosis? (Marks 2)
- Q.3 iv) Differentiate between anabolism and catabolism. (Marks 2)
- Q.3 v) What are substrates? (Marks 2)
- Q.3 vi) Differentiate between aerobic and anaerobic respiration. (Marks 2)
- Q.3 vii) What is meant by electron transport Chain? (Marks 2)
- Q.3 viii) What is photolysis? (Marks 2)
- Q.4 i) Write the sources of soluble dietary fibres. (Marks 2)
- Q.4 ii) What is marasmus? (Marks 2)
- Q.4 iii) What is gastric juice? (Marks 2)
- Q.4 iv) Write effects of carbonated soft drinks. (Marks 2)
- Q.4 v) What is meant by sink? (Marks 2)
- Q.4 vi) Write the structure of red blood cells. (Marks 2)
- Q.4 vii) What is meant by vascular surgery? (Marks 2)
- Q.4 viii) Write symptoms of dengue fever. (Marks 2)

Q.5 a) Describe the relationship of Biology to Biophysics and Biomathematics.  
(Marks 5)

Q.5 b) Describe the types of muscle tissues. (Marks 4)

Q.6 a) Explain the uses of enzymes. (Marks 5)

Q.6 b) Describe the mechanism of respiration in detail. (Marks 4)

Q.7 a) Discuss the role of oral cavity in digestion. (Marks 5)

Q.7 b) Write a note on ABO blood group system. (Marks 4)