

LAHORE BOARD

GRADE 9

BIOLOGY

2019 GROUP 1

MCQ's

i) Main photosynthetic pigment is:

(Mark 1)

- A. Chlorophyll 'b'
- B. Chlorophyll 'a'
- C. Carotenoids
- D. Xanthophylls

Answer:

- B. Chlorophyll 'a'

ii) Microtubules are made of:

(Mark 1)

- A. Tubulin protein
- B. RNA
- C. DNA
- D. Actin protein

Answer:

- A. Tubulin protein

iii) An artery that supplies blood to liver is:

(Mark 1)

- A. Renal artery
- B. Femoral artery

- C. Hepatic artery
- D. Coronary artery

Answer:

C. Hepatic artery

iv) An example of a multicellular organism is: (Mark 1)

- A. Bacteria
- B. Frog
- C. Amoeba
- D. Euglena

Answer:

B. Frog

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

- A. Glucose
- B. Sucrose
- C. Starch
- D. Lactose

Answer:

B. Sucrose

vi) The Italian word "Mala" means: (Mark 1)

- A. Bad
- B. Good
- C. Air
- D. Water

Answer:

A. Bad

vii) In children, deficiency of vitamin D causes: (Mark 1)

- A. Osteomalacia
- B. Scurvy
- C. Night blindness
- D. Rickets

Answer:

- A. Osteomalacia

viii) Five kingdom classification system was introduced by: (Mark 1)

- A. Schwartz
- B. Margulis
- C. Aristotle
- D. Robert Whittaker

Answer:

- D. Robert Whittaker

ix) The largest taxon in biological classification is: (Mark 1)

- A. Phylum
- B. Class
- C. Kingdom
- D. Genus

Answer:

- C. Kingdom

x) During this phase, chromosomes are arranged at the equator of the cell.
(Mark 1)

- A. Prophase
- B. Metaphase
- C. Telophase
- D. Anaphase

Answer:

- B. Metaphase

xi) Pores through which cytoplasm of adjacent cells is connected:
(Mark 1)

- A. Stomata
- B. Plasmodesmata
- C. Lenticels
- D. Cuticle

Answer:

- B. Plasmodesmata

xii) Lipase enzyme acts on molecules: (Mark 1)

- A. Lipids
- B. Starch
- C. Cellulose
- D. Proteins

Answer:

- A. Lipids

Q.2 i) Define physiology and anatomy. (Marks 2)

Q.2 ii) Define population and community. (Marks 2)

Q.2 iii) What is difference between ratio and proportion. (Marks 2)

Q.2 iv) Write down any two characteristics of hypothesis. (Marks 2)

Q.2 v) Define deforestation and write its causes. (Marks 2)

Q.2 vi) Write any two characteristics of organisms of kingdom monera. (Marks 2)

Q.2 vii) Describe briefly sclerenchyma tissue. (Marks 2)

Q.2 viii) Define hypotonic and hypertonic solutions. (Marks 2)

Q.3 i) Differentiate between chromatin and chromosomes. (Marks 2)

Q.3 ii) How cytokinesis takes place in plant cells. (Marks 2)

Q.3 iii) When and who discovered meiosis? (Marks 2)

Q.3 iv) What is meant by metabolism? Who first of all gave the concept of metabolism? (Marks 2)

Q.3 v) Describe metabolic pathways. (Marks 2)

Q.3 vi) What is glycolysis? (Marks 2)

Q.3 vii) What are anaerobes? Write two examples. (Marks 2)

Q.3 viii) Sketch molecular structure of adenosine triphosphate. (Marks 2)

Q.4 i) Define scurvy. Write its two symptoms. (Marks 2)

Q.4 ii) How does iodine function in our body? (Marks 2)

Q.4 iii) What is the function of pepsin in stomach? (Marks 2)

Q.4 iv) Write down four causes of ulcer. (Marks 2)

Q.4 v) How transpiration rate affects when air movement changes?

(Marks 2)

Q.4 vi) Write down four name of human heart chambers. (Marks 2)

Q.4 vii) How pus is produced? (Marks 2)

Q.4 viii) Write down two symptoms of dengue fever. (Marks 2)

Q.5 a) Explain the relationship of biology to any other four sciences.

(Marks 4)

Q.5 b) Describe five differences between prokaryotic and eukaryotic cells. (Marks 5)

Q.6 a) Describe the lock and key model of the mechanism of enzyme action. (Marks 5)

Q.6 b) What do you mean by photosynthesis? Describe differences between photosynthesis and respiration. (Marks 4)

Q.7 a) Describe mineral deficiency diseases. (Marks 4)

Q.7 b) What do you mean by blood groups? How do we classify blood groups in terms of ABO and Rh blood group systems? (Marks 5)

LAHORE BOARD

GRADE 9

BIOLOGY

2019 GROUP 2

MCQ's

i) Seastar gain its lost arm by:

(Mark 1)

- A. Budding**
- B. Mitosis**
- C. Meiosis**
- D. Fragmentation**

Answer:

B. Mitosis

**ii) Transpiration rate does not depend upon:
1)**

(Mark

- A. Leaf diameter**
- B. Temperature**
- C. Air movement**
- D. CO₂**

Answer:

D. CO₂

**iii) The scientific name of the onion is:
1)**

(Mark

- A. *Allium cepa*
- B. *Asterias rubens*
- C. *Zia maiz*
- D. *Felis domesticus*

Answer:

- A. *Allium cepa*

iv) The whole series of light reaction is called: (Mark 1)

- A. S-scheme
- B. Z-scheme
- C. L-scheme
- D. P-scheme

Answer:

- B. Z-scheme

v) The blood group which contains antigen A: (Mark 1)

- A. A
- B. B
- C. AB
- D. O

Answer:

- A. A

vi) Famous book of Jabir bin Hayan is: (Mark 1)

- A. Al-Kheil**
- B. Al-Wahoosh**
- C. Al-Nabatat**
- D. Al-Abil**

Answer:

- C. Al-Nabatat**

vii) In 1831, the nucleus was discovered in the cell by: (Mark 1)

- A. Robert Hooke**
- B. Laveran**
- C. Robert Brown**
- D. Louis Pasteur**

Answer:

- C. Robert Brown**

viii) The malaria is spread in sparrows by: (Mark 1)

- A. Anopheles**
- B. Dengue**
- C. Aedes**
- D. Culex**

Answer:

- D. Culex**

ix) In 1894, Lock and key model was proposed by: (Mark 1)

- A. Emil Fischer**
- B. Daniel Koshland**
- C. Wilhelm**
- D. Calvin**

Answer:

- A. Emil Fischer**

**x) Cell membrane is mainly composed of:
1)**

(Mark

- A. Protein and lipids**
- B. Cholesterol**
- C. Lignin**
- D. Chitin**

Answer:

- A. Protein and lipids**

xi) Five kingdom classification was introduced by:

(Mark 1)

- A. Margulis and Schwartz**
- B. Torn Effort**
- C. Robert Whittaker**
- D. Ernest Hackel**

Answer:

- C. Robert Whittaker**

xii) The disease caused by the deficiency of protein is:

(Mark 1)

- A. Goitre
- B. Osteoarthritis
- C. Marasmus
- D. Colour blindness

Answer:

C. Marasmus

Q.2 i) Define parasitology.

(Marks 2)

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

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

Q.2 iv) Write two observations of A.F.A King. (Marks 2)

Q.2 v) Describe two properties of kingdom fungi. (Marks 2)

Q.2 vi) Write down the name of two endangered species in Pakistan.

(Marks 2)

Q.2 vii) Describe two functions of cell membrane. (Marks 2)

Q.2 viii) Write two functions of lysosomes. (Marks 2)

Q.3 i) Define karyokinesis and cytokinesis. (Marks 2)

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

Q.3 iii) What is meant by alternation of generation. (Marks 2)

Q.3 iv) What is meant by active site in enzyme? (Marks 2)

Q.3 v) Differentiate between prosthetic group and co-enzyme.

(Marks 2)

Q.3 vi) Differentiate between aerobic and anaerobic respiration.

(Marks 2)

Q.3 vii) Write down the three sub-units of ATP. (Marks 2)

Q.3 viii) Differentiate between photosynthesis and respiration.

(Marks 2)

Q.4 i) What is the role of magnesium in plants? (Marks 2)

Q.4 ii) Describe the causes of ulcer. (Marks 2)

Q.4 iii) What is chyme? (Marks 2)

Q.4 iv) Differentiate between saturated and unsaturated fatty acids.

(Marks 2)

Q.4 v) How does wind (air in motion) affect the rate of transpiration?

(Marks 2)

Q.4 vi) What is blood. Write the name of its parts. (Marks 2)

Q.4 vii) Differentiate between pulmonary circulation and systematic circulation. (Marks 2)

Q.4 viii) Write the name of an organism which transmits dengue fever. (Marks 2)

Q.5 a) Describe careers in the field of biology of medicine/surgery and horticulture. (Marks 4)

Q.5 b) Define compound tissues and explain compound tissues.

(Marks 5)

Q.6 a) Explain mechanism of enzyme action. (Marks 4)

Q.6 b) Explain the mechanism of respiration. (Marks 5)

Q.7 a) Write the importance of fertilizers in detail. (Marks 4)

Q.7 b) How uptake of water and ions takes place in plants? (Marks 5)

