AGA KHAN UNIVERSITY EXAMINATION BOARD

SECONDARY SCHOOL CERTIFICATE

CLASS IX

ANNUAL EXAMINATIONS (THEORY) 2024

Biology Paper II

Time: 1 hour 50 minutes Marks: 25

AKU-EB Examinations 2024 For learning only

INSTRUCTIONS

Please read the following instructions carefully.

1. Check your name and school information. Sign if it is accurate.

I agree that this is my name and school. **Candidate's Signature**

RUBRIC

2. There are SEVEN questions. Answer ALL questions. Questions 6 & 7 each offer TWO choices. Attempt any ONE choice from each.

3. When answering the questions:

   Read each question carefully.
   Use a black pointer to write your answers. DO NOT write your answers in pencil.
   Use a black pencil for diagrams. DO NOT use coloured pencils.
   DO NOT use staples, paper clips, glue, correcting fluid or ink erasers.
   Complete your answer in the allocated space only. DO NOT write outside the answer box.

4. The marks for the questions are shown in brackets ( ).

5. You may use a simple calculator if you wish.

Q.1. (Total 2 Marks)

Describe the concept of division of labour among the different types of cells in human trachea in any TWO points.

Q.2. (Total 3 Marks)

Shoaib conducted an experiment to determine the effect of a fertiliser on the growth of plants.

He used four pots with different species of plants and varying amounts of soil and fertiliser for his experiment. However, he could not obtain the required result.

Identify any THREE errors in his experimental set-up.

Q.3. (Total 3 Marks)

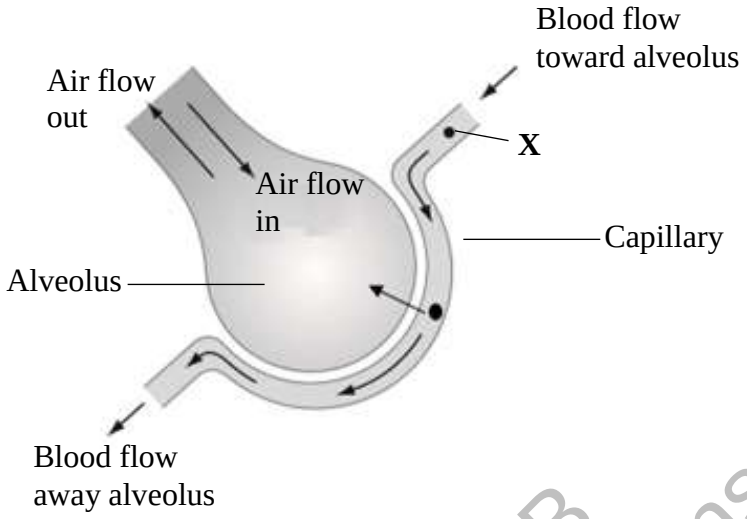
Complete the given table by mentioning the demerits of kingdom classification systems.

Classification System	Demerit
Two-kingdom classification system	1. 2.
Five-kingdom classification system	1.

AKU-EB Annual Examinations 2024 for Teaching & Learning only

Q.4. (Total 3 Marks)

The given diagram represents an alveolus and blood capillary. **X** represents a gas molecule.



i. Identify molecule **X**. (1 Mark)

ii. What would be the effect of rigorous exercise on the concentration of molecule **X** in the human body? (1 Mark)

iii. Why is the percentage composition of molecule **X** in alveolar air different from the atmospheric air? (1 Mark)

Q.5. (Total 2 Marks)

How can change in the pH beyond the optimum level affect the structure of enzyme?

Describe in TWO points.

AKU-EB Annual Examinations 2024 for Teaching & Learning only

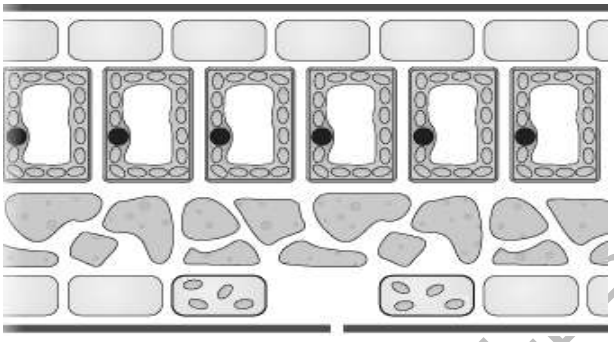
Q.6. (Total 6 Marks)

EITHER

a. Describe structural adaptations in any THREE of the permanent tissues in plants that help to perform their function efficiently.

OR

b. The given diagram shows the cross-section of a leaf.



Describe the structural adaptation and advantages of any THREE features present in the cross-section of the leaf shown in the given diagram.

AKU-EB Annual Examinations 2024 for Teaching & Learning only

Q.7. (Total 6 Marks)

EITHER

a. Sara is 25 years old and spends most of her time studying in a library. Her brother Zia is 15 years old and spends most of his time playing with friends. They consume same quality and quantity of food. Zia is lean and Sara is overweight.

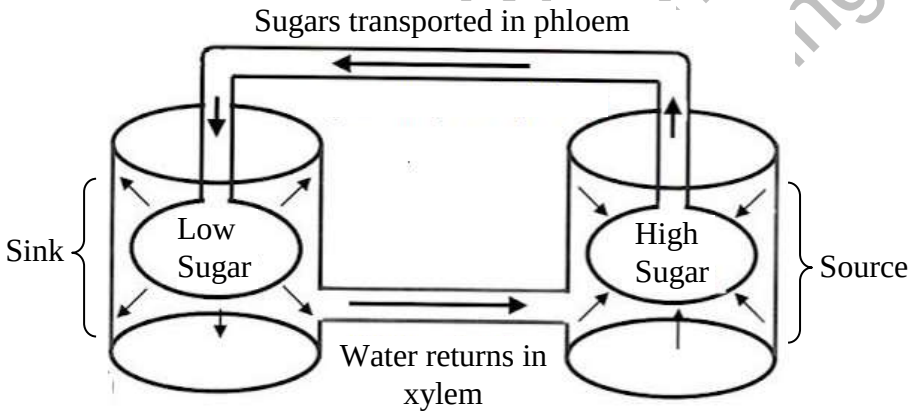
With reference to the energy requirement and consumption of both Sara and Zia,

i. identify THREE factors that cause the difference in their weight. (3 Marks)

ii. describe each of the factor identified in part i. (3 Marks)

OR

b. The given schematic diagram represents one of the processes in plants.



i. Identify the mechanism that is depicted in the given diagram. (1 Mark)

ii. Describe the identified mechanism in FIVE points. (5 Marks)

Answers for Teachers 2024 Training only

AKU-EB
Annual Examinations 2024
for Teaching & Learning only

END OF PAPER

Please use this page for rough work

AKU-EB
Annual Examinations 2024
for Teaching & Learning only

Please use this page for rough work

AKU-EB
Annual Examinations 2024
for Teaching & Learning only