

AGA KHAN UNIVERSITY EXAMINATION BOARD

SECONDARY SCHOOL CERTIFICATE

CLASS IX

ANNUAL EXAMINATIONS (THEORY) 2023

Biology Paper II

Time: 1 hour 50 minutes Marks: 25

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.

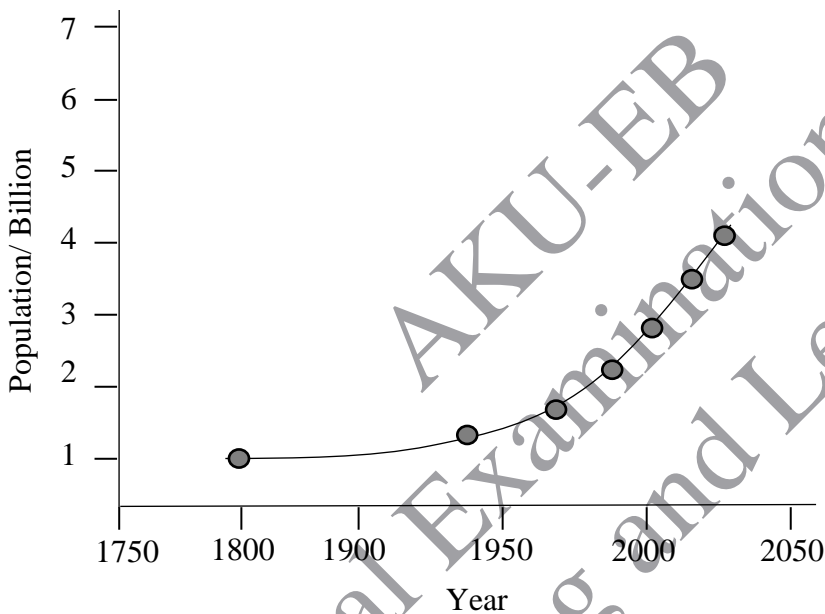
Q.1. (Total 2 Marks)

A biological research department is working on a project in which the biologists have to study the fossils, with reference to their chemical composition, origin and binomial nomenclature.

Identify any TWO branches of biology which are involved in this project.

Q.2. (Total 3 Marks)

Consider the given graph.



Using the information in the given graph,

a. identify the dependent and independent variables. (2 Marks)

Dependent variable: _____

Independent variable: _____

b. interpret the trend in population. (1 Mark)

Q.3.

(Total 3 Marks)

The five-kingdom classification system better explains the diversity of living organisms.

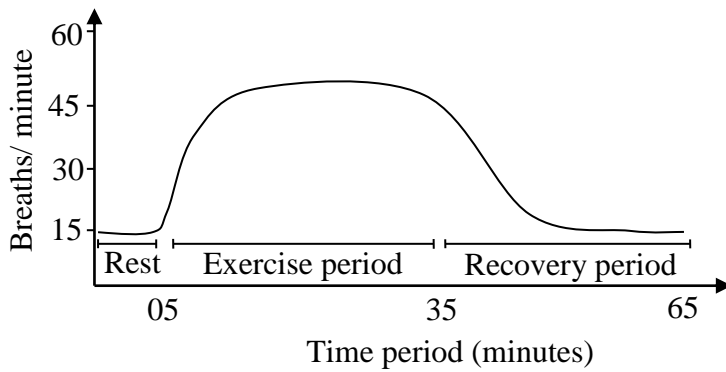
Write any THREE points to support the given statement.

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Q.4. (Total 3 Marks)

The given graph represents the effect of exercise on breathing rate.



a. Identify the time period in which maximum amount of oxygen would be consumed by the body. (1 Mark)

b. Why does the breathing rate remain high at the beginning of the recovery period? (1 Mark)

c. Mention the physiological activity other than breathing rate that will also increase during exercise. (1 Mark)

Q.5. (Total 2 Marks)

Describe any TWO ways in which co-factors help enzymes to work effectively.

Q.6.

(Total 6 Marks)

EITHER

a. Describe any SIX functions of cell membrane in the human body.

OR

b. Describe any THREE structural adaptations of chloroplast for harvesting light energy and carrying out photosynthesis.

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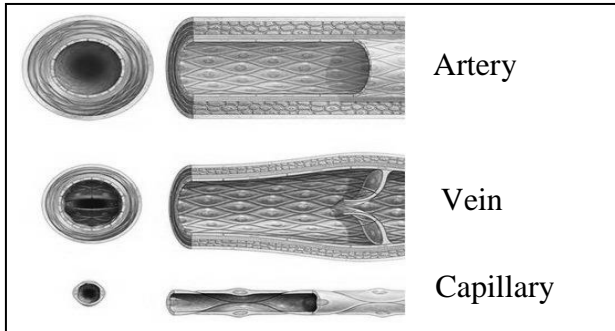
Q.7. (Total 6 Marks)

EITHER

a. Analyse how climate change can lead to famine in an area. (6 Marks)

OR

b. Each of the given blood vessels has a specialised structure which is adapted for its specific function.



- i. Identify ONE structural feature of each blood vessel. (3 Marks)
- ii. Describe how each structural feature identified in part i enables the respective blood vessel to perform a specific function. (3 Marks)

Please use this page for rough work

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