AGA KHAN UNIVERSITY EXAMINATION BOARD

SECONDARY SCHOOL CERTIFICATE

CLASS IX

MODEL EXAMINATION PAPER 2018

Biology Paper II

Time: 2 hours 15 minutes Marks: 35

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 NINE questions. Answer ALL questions. Questions 8 and 9 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 ( ).

Q.1. (Total 3 Marks)

Complete the given table by identifying the branch of biology with respect to its significance.

Significance of the Branch of Biology	Name of the Branch of Biology
This branch of biology helps scientists to propose appropriate habitat for the living organisms and find out ways to reduce different types of pollution.	
This branch of biology enables scientists to make use of living organisms for the benefits of mankind.	
This branch of biology supports scientists to find out the evolutionary relationships between different organisms on the basis of dead remains.	

Q.2. (Total 3 Marks)

Fahad conducts an experiment to investigate the effect of humidity on the rate of transpiration in plants. After a week, he records the following data.

Day	Humidity (%)	Transpiration Rate ($g/m^2/hr$)
1	40	198
2	61	188
3	62	186
4	75	150
5	78	80
6	80	60
7	88	57

Present the given data in the form of a graph.

Space for graph

Q.3. (Total 3 Marks)

State any THREE salient features of prokaryotes.

Q.4. (Total 3 Marks)

List any THREE factors that affect the rate of photosynthesis in plants.

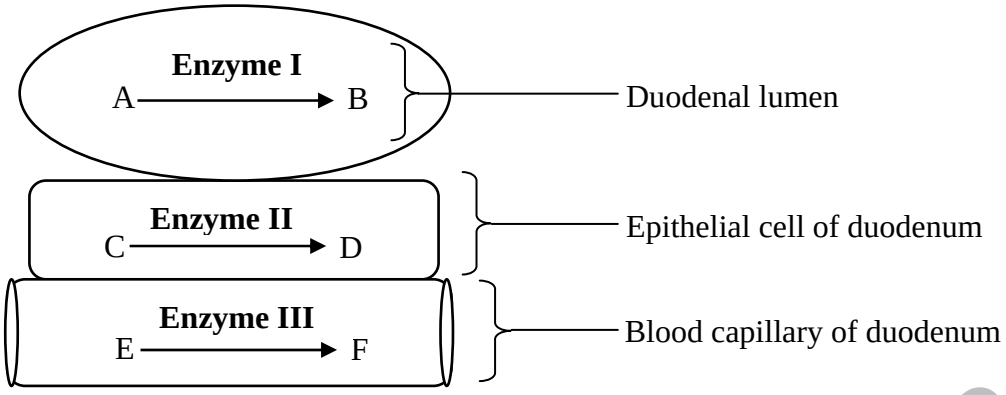
Q.5. (Total 3 Marks)

Complete the given table by stating the percentage of given gases in the exhaled air of human beings.

Gas	Inhaled Air (%)	Exhaled Air (%)
Oxygen	21	
Carbon dioxide	0.04	
Nitrogen	78	

Q.6. (Total 2 Marks)

The given diagram illustrates the activity of three enzymes in the duodenum of human beings.



Classify the enzymes, **I**, **II** and **III**, as intracellular or extracellular.

Intracellular Enzyme	Extracellular Enzyme

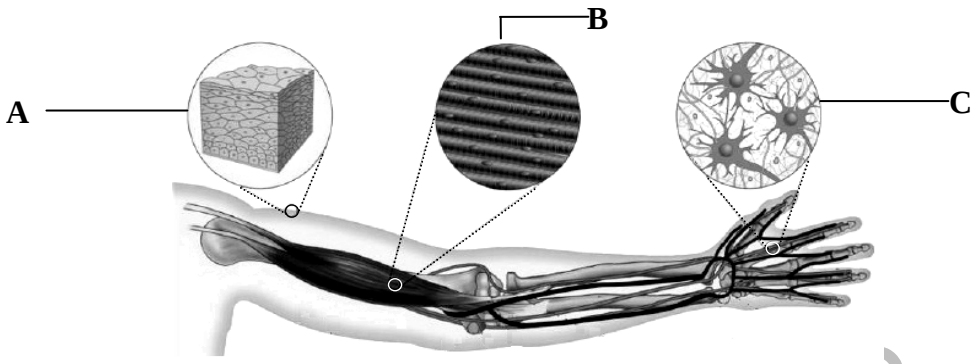
Q.7. (Total 3 Marks)

Mention any THREE protective functions of blood against diseases in the human body.

Q.8. (Total 7 Marks)

EITHER

a. The given diagram shows different types of tissues present in the human arm.



i. State any ONE feature of animal tissues. (1 Mark)

ii. Describe the specificities and functions of tissues, labelled as **A**, **B** and **C** shown in the given diagram. (6 Marks)

OR

b. Explain the process of oxidation of glucose that takes place in the cells of human beings with reference to the mechanism of cellular respiration. (7 Marks)

Q.9. (Total 8 Marks)

EITHER

a.

i. Mention any ONE advantage and ONE disadvantage of using organic fertilisers. (2 Marks)

ii. Explain the effects of excessive use of inorganic fertilisers on the following: (6 Marks)

I. Global climate

II. Aquatic life

OR

b. The human heart is adapted to its function.

Explain the given statement with reference to the structure of any FOUR parts of the heart and their relevant functions. (8 Marks)

END OF PAPER

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