

**AGA KHAN UNIVERSITY EXAMINATION BOARD**

**SECONDARY SCHOOL CERTIFICATE**

**CLASS X EXAMINATION**

**MAY 2012**

**Biology Paper II**

**Time allowed: 2 hours 25 minutes    Marks 40**

**INSTRUCTIONS**

**Please read the following instructions carefully.**

1. Check your name and school information. Sign that it is correct.

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

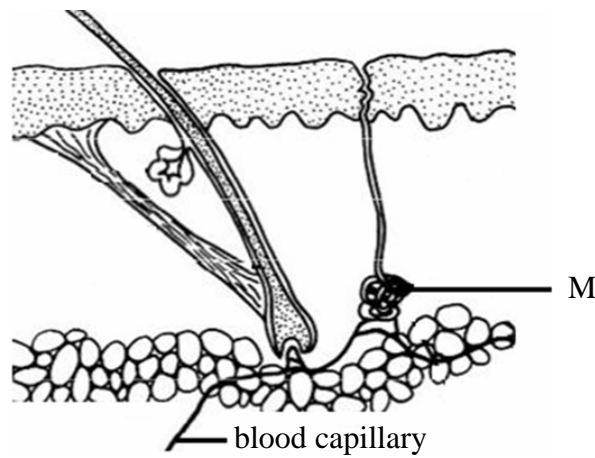
2. RUBRIC. There are NINE questions. Answer ALL NINE questions. Questions 7, 8 and 9 each offer TWO choices. Attempt any ONE choice from each.
3. When answering the questions:  
  
Read each question carefully.  
Use a black pencil for diagrams. DO NOT use coloured pencils.  
DO NOT use staples, paper 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 4 Marks)

a. How is photosynthesis different from respiration? (2 Marks)

	Photosynthesis	Respiration
1		
2		

b. The diagram shows a section of the human skin. (2 Marks)



Briefly describe the role of the labelled structure M in keeping the body temperature constant.

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Q.2. (Total 4 Marks)

a. What features of nervous control make it better over hormonal control? (2 Marks)

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

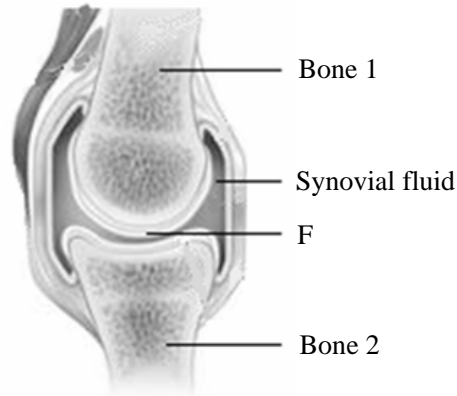
\_\_\_\_\_

- b. Recall your knowledge about a brain disorder called epilepsy and complete the given table. (2 Marks)

<b>Symptoms</b>	1.
	2.
<b>Treatment</b>	

Q.3. (Total 5 Marks)

- a. The diagram shows a joint of the skeletal system. (3 Marks)



Identify structure F and describe the disorder which might occur if this structure is degenerated.

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- b. Why is water necessary for the germination of seeds? (2 Marks)

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Q.4. (Total 4 Marks)

a. Human blood is classified into A, B, AB and O blood groups. Out of these, which blood group is an example of co-dominance? Justify your answer with a suitable reason. (2 Marks)

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b. Variations are differences in traits or characteristics between individuals of the same species. How is this phenomenon beneficial to a particular species? (2 Marks)

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Q.5. (Total 4 Marks)

Using the given list of organisms, construct a food web. (You may not include all the organisms)

- |        |              |          |       |        |             |        |              |
|--------|--------------|----------|-------|--------|-------------|--------|--------------|
| Bats   | beetles      | spiders  | grass | eagles | squirrels   | humans | Rabbits      |
| aphids | caterpillars | oak tree | cows  | frogs  | maize plant | hawks  | grass hopper |

Q.6.

(Total 4 Marks)

a. Who should include single cell proteins in his/her diet? Why?

(2 Marks)

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b. State TWO conditions under which sedatives are prescribed by a doctor.

(2 Marks)

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