2019 HKDSE Biology

Exam Analysis

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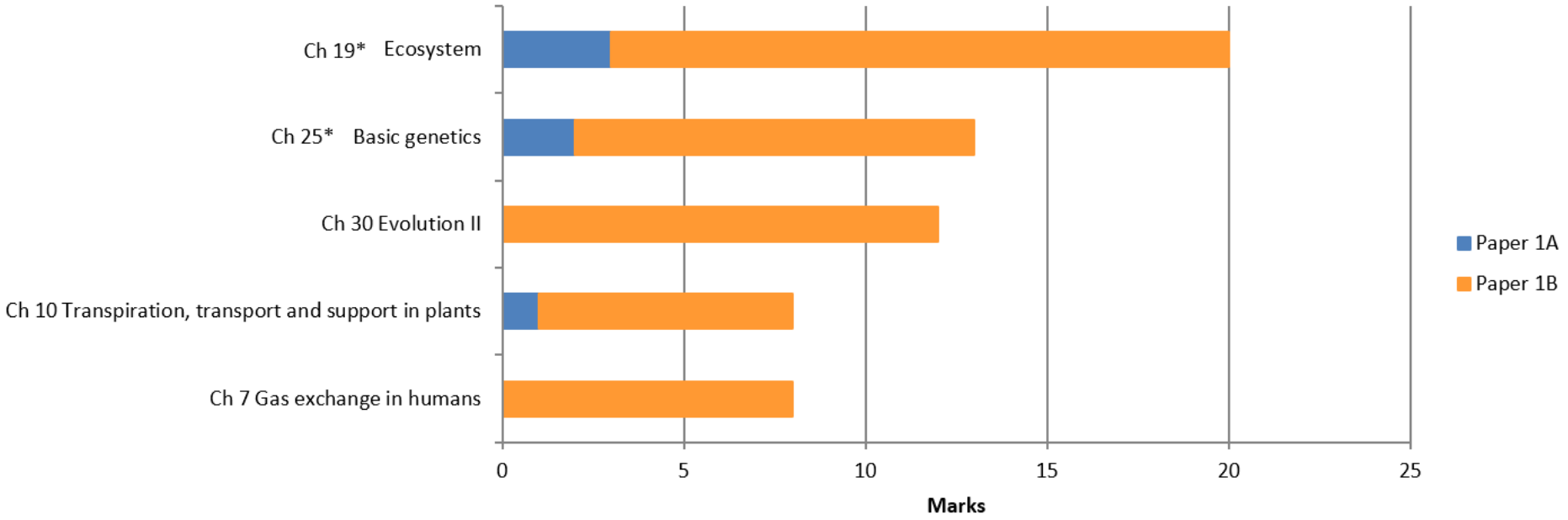
1 Coverage

Most topics in the curriculum are covered. More marks are allocated to the chapters (3rd edition) below:



[* Also hot topics in 2018 HKDSE papers]

2 Level of difficulty

a The multiple-choice questions in 2019 and 2018 HKDSE papers are of similar level of difficulty. In Paper 1A, Q7, 10, 11, 28 and 30 are more challenging and may be set to differentiate students of different abilities.

b The conventional questions in 2019 and 2018 HKDSE papers are of similar level of difficulty. In Paper 1B, Q7b, 8 and 11 are more challenging and may be set to differentiate students of different abilities.

c In Paper 2, Q1b(iii), 2a(ii), 2b(ii), 3b(iii)(2) and 4a(iii) are comparatively more difficult.

3 Skills or abilities assessed

A number of questions this year are set on scenarios in daily life. The papers also assess different types of skills and abilities. They are shown in the table below.

		Paper 1A	Paper 1B
a	**Skills related to SBA**		
	i Making observations	Q5, 19, 20 and 32	Q2 and 4a
	ii Designing experiments		
	• Identifying variables	Q7 and 30	-
	• Ensuring reliability of results and validity of conclusions	Q9 and 10	Q6c
	iii Result prediction	Q6, 11 and 25	Q6b
	iv Interpreting data or graphs	Q4, 10, 11, 26 and 31	Q6a, 7b, 9a and 10a
	v Interpreting photomicrographs or electron micrographs	Q1 and 27	Q3b, 3c, 5a, 6d and 7a
	vi Drawing conclusions	Q28	Q8a(i) and 8b
b	**Understanding of the nature of science (NOS)**	-	Q8a
c	**Applying knowledge in unfamiliar situations**	Q5, 16, 17, 20, 21 and 35	Q4, 7, 5b, 8c and 9
d	**Communication**	-	Q5, 8c, 9a, 10c and 11

4 Challenging questions

Some questions in the papers are challenging. The table below lists the difficulties students may encounter when answering these questions. Suggestions for developing the necessary skills and abilities to address similar questions are also listed below.

Question	Difficulty	Suggestion
Paper 1A Q10 - An investigation of the effect of temperature on catalase activity	Students often have difficulty in interpreting graphs.	Students should look for the time period when there is a largest change in volume of gas. Students should expose to more experiments to develop skills for answering this type of questions.
Paper 1A Q28 - An investigation of the transport of auxins in young seedlings	Students often have difficulty in drawing conclusions from experimental results.	Students should know the difference between a correct statement and a valid conclusion. Student should practice more to develop skills for answering this type of questions.
Paper 1B Q8 - Development of knowledge about ultrasound navigation of bats	Students often find answering questions set on NOS difficult. They may have difficulty in explaining how the historical events can demonstrate certain aspects of NOS.	Students should understand NOS through reviewing the history of biology and discussing biological concepts.

Question	Difficulty	Suggestion
Paper 1B Q11 - Vulnerability of pure-bred pets to genetic diseases	Students may have difficulty in applying biological concepts they have learnt to daily life.	Students should write clearly the relationship between breeding process, genetic variations and genetic disease.
Paper 2 Q2a(ii)(1) - The difference in chemical composition of effluent from sewage treatment plant and artificial wetland	Students are unfamiliar with the principle of artificial wetland. They are generally weak in applying concepts to unfamiliar situations. They may not be able to integrate the data from the question with biological concepts they have learnt.	Students have to integrate information from the question with the biological concepts learnt. More practice on higher-order thinking may help develop skills for answering this type of questions.
Paper 2 Q4a(iii) - The suitability of using semen and blood for DNA fingerprinting	Students may have difficulty in applying what they have learnt to judge whether semen and blood are suitable samples for DNA fingerprinting.	Students have to integrate biological concepts learnt from different topics to make reasonable judgment. More practice on critical thinking may help develop skills for answering this type of questions.

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