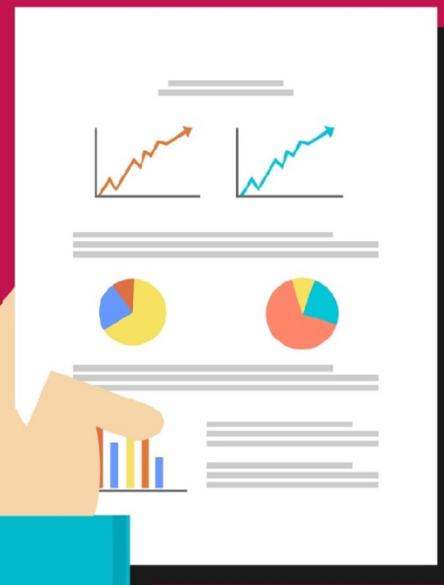


2018 HKDSE

Biology and Combined Science (Biology)

Exam Analysis

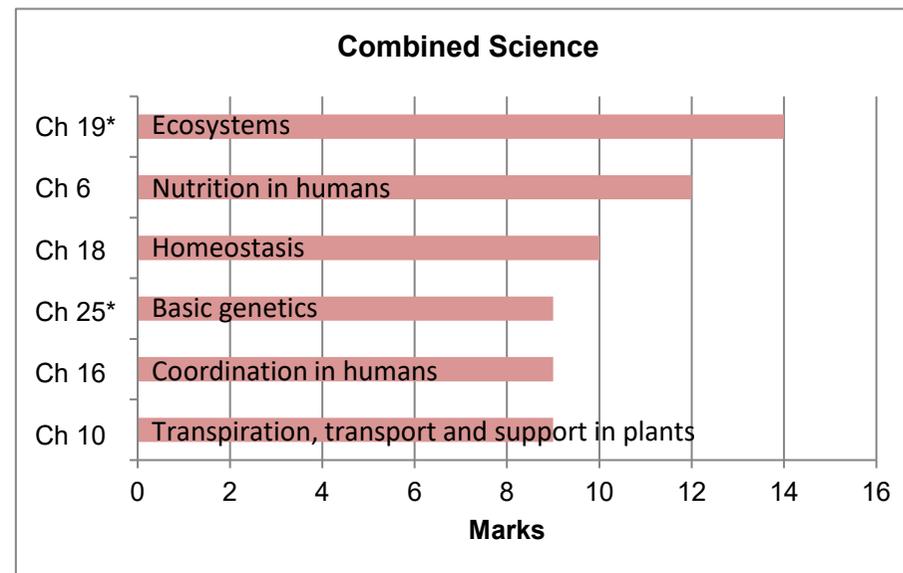
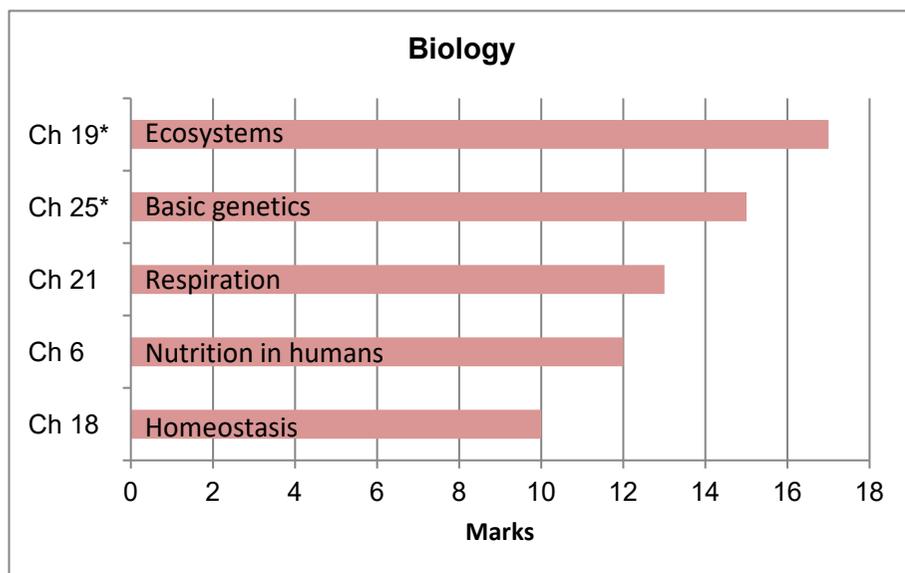


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1 Coverage

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



[* Also hot topics in 2017 HKDSE papers]

b Relationship between Biology and Combined Science:

- i In Combined Science Section A, all the multiple-choice questions are common with Biology Paper 1A.
- ii In Combined Science Section B, Q1, 2, 5, 6, 7 and 8 are common with Biology Paper 1B. Q4 is slightly different from Q4 in Biology Paper 1B. Both Q3 in Combined Science Section B and Biology Paper 1B involve the same photomicrograph but different questions are set.

2 Level of difficulty

- a The multiple-choice questions in 2018 and 2017 HKDSE papers are of similar level of difficulty. In Biology Paper 1A, Q4, 12, 13, 25, 28 and 36 (CS A Q3, 8, 9, 17 and 19) are more challenging and may be set to differentiate students of different abilities.
- b The conventional questions in 2018 and 2017 HKDSE papers are of similar level of difficulty. In Biology Paper 1B, Q3b, 6b, 8b and 11 (CS B Q7b and 8) are more challenging and may be set to differentiate students of different abilities.
- c In Biology Paper 2, Q1b(iii), 2a(ii), 2b(ii)(2), 3a(ii)(3) and 4b(iii)(2) are comparatively more difficult.

3 Skills or abilities assessed

More 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.

	Biology Paper 1A (CS Section A)	Biology Paper 1B (CS Section B)
a Skills related to SBA		
i Making observations	Q2, 8, 23 and 35 (Q1, 6, 15 and 24)	Q2a, 2b, 3a and 5a (Q2a, 2b, 3a and 5a)
ii Designing experiments <ul style="list-style-type: none"> Identifying variables Setting up controls 	- Q4 (Q3)	Q8b i (Q7b i) -
iii Result prediction	Q3 (Q2)	-
iv Interpreting data or graphs	Q25 and 30 (Q17 and 20)	Q4a, 4b, 6b and 8b iii (Q4a, 4b and 7b iii)
v Interpreting photomicrographs or electron micrographs	Q8 (Q6)	Q2, 3, 5a and 5b (Q2, 3, 5a and 5b)
vi Drawing conclusions	Q31 (Q21)	-
b Understanding of the nature of science (NOS)	-	Q10c
c Applying knowledge in unfamiliar situations	-	Q3b, 7 and 9 (Q6)
d Communication	-	Q4c, 8b iii, 9a, 10b and 11 (Q7b iii and 8)

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
Biology Paper 1A Q4 (CS A Q3) - An investigation of the action of catalase	Students' understanding of how to set up a control is usually poor. It may not be easy for them to identify the correct control set-up.	Students should notice that the factor under investigation (i.e. hydrogen peroxide) is absent in the control. Students should expose to more different controlled experiments.
Biology Paper 1A Q25 (CS A Q17) - Interpretation of a graph showing the relationship between dietary fibre content of a meal and the mean retention time	Students often have difficulty in making an inference of an observation based on prior knowledge. They may not be able to choose the correct answer.	Students should determine the relationship of the two variables from the graph, and then make a logical deduction. Students should practise more to develop skills for answering this type of questions.
Biology Paper 1B Q3 - Photomicrographs showing the transverse sections of leaves	Students are unfamiliar with the structure of a monocotyledonous leaf. They are generally weak in applying their biological knowledge to unfamiliar situations.	Students should observe the photomicrographs carefully and find out the unique features. Students should expose to a wider variety of photomicrographs to develop the required skills.

Question	Difficulty	Suggestion
Biology Paper 2 Q2b ii, iii - Effect of the amounts of organic pollutants on the invertebrate community in a harbour	Students are usually weak in analysing data presented in graphs. They may not be able to select evidences from the graph to support their deduction. They may also find it difficult to present their deduction clearly.	Students should read questions carefully to understand the situation. Training on the use of language, e.g. in making deductions, should be strengthened.
Biology Paper 2 Q4b iii - Blue-white screening for transformed bacteria	Students may have difficulty in applying what they have learnt to work out the principle of this screening method.	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.

~ END ~