

Edexcel AS GCE Biology (8BI01)

Edexcel AS UNIT 2: Development, plants and environment

Edexcel AS Biology

Unit 1:
6BI01

Unit 2:
6BI02

Unit 3:
6BI03



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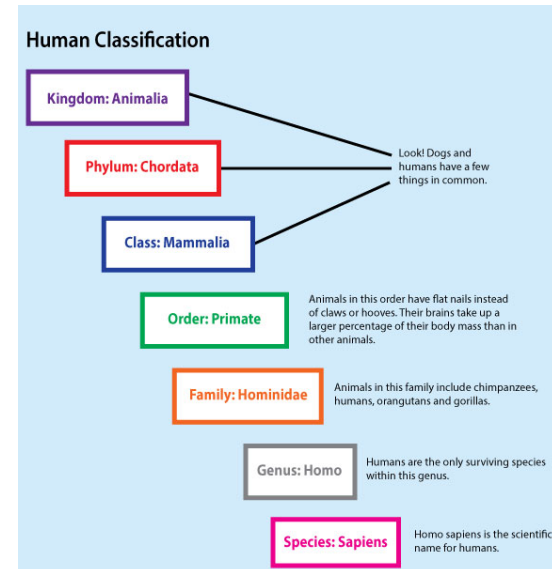
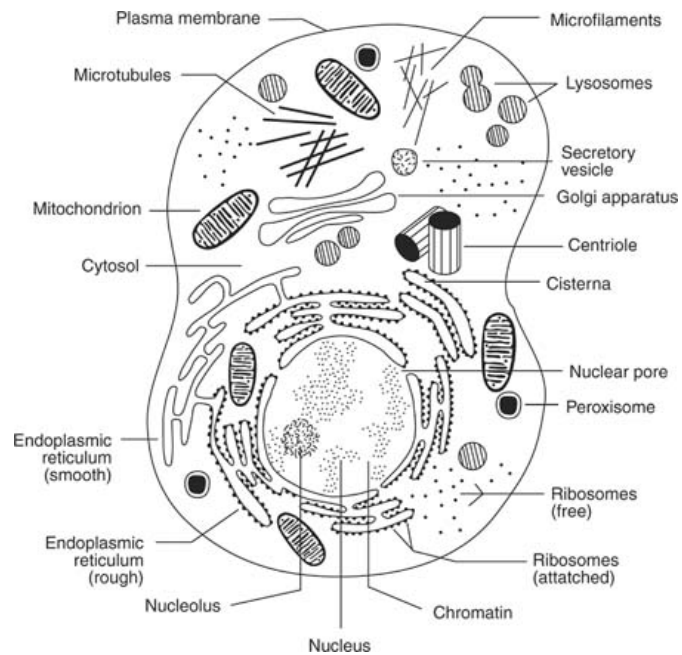
Unit 6BI02: Development, Plants and Environment Paper code: 6BI02 QP																																														
1. Exam paper- 6BI02: Development, Plants and Environment 1 st June May 2015	20 % of Advanced GCE Biology																																													
Overview of content																																														
<ol style="list-style-type: none"> Module 1: The voice of the genome Module 2: Biodiversity and natural resources 																																														
Overview of assessment																																														
<ol style="list-style-type: none"> The unit is assessed through a 1-hour and 30 min examination paper set and marked by Edexcel. The total number of marks is 80 and contains objective questions, short-answered and structured questions. Grades A–E are available. Grades assessment by year: 																																														
<table border="1"> <thead> <tr> <th>Year</th> <th>Raw Marks to 90 % UMS - A*</th> <th>Raw Marks to 80 % UMS grade 'A'</th> </tr> </thead> <tbody> <tr><td>Jan 2009</td><td></td><td>52</td></tr> <tr><td>Jun 2009</td><td></td><td>61</td></tr> <tr><td>Jan 2010</td><td>-</td><td>57</td></tr> <tr><td>Jun 2010</td><td>-</td><td>59</td></tr> <tr><td>Jan 2011</td><td>-</td><td>60</td></tr> <tr><td>Jun 2011</td><td>-</td><td>59</td></tr> <tr><td>Jan 2012</td><td>-</td><td>64</td></tr> <tr><td>Jun 2012</td><td>-</td><td>61</td></tr> <tr><td>Jan 2013</td><td>-</td><td>64</td></tr> <tr><td>Jun 2013</td><td>-</td><td>62</td></tr> <tr><td>Jun 2013 -R</td><td>-</td><td>60</td></tr> <tr><td>Jun 2014</td><td>-</td><td>60</td></tr> <tr><td>Jun 2014 -R</td><td>-</td><td>64</td></tr> <tr><td>Jun 2015</td><td>?</td><td>?</td></tr> </tbody> </table>		Year	Raw Marks to 90 % UMS - A*	Raw Marks to 80 % UMS grade 'A'	Jan 2009		52	Jun 2009		61	Jan 2010	-	57	Jun 2010	-	59	Jan 2011	-	60	Jun 2011	-	59	Jan 2012	-	64	Jun 2012	-	61	Jan 2013	-	64	Jun 2013	-	62	Jun 2013 -R	-	60	Jun 2014	-	60	Jun 2014 -R	-	64	Jun 2015	?	?
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Edexcel AS GCE Biology

AS unit 6BI02: Development, Plants and the Environment

Module 1: *The voice of the genome*

Module 2: Biodiversity and natural resources



How BioChem Tuition prepares their students for 6BI02: *Development, Plants and the Environment*?

BioChem Tuition has a three-pronged strategy to prepare students for 6BI02 for obtaining grade A or A*.

1. **Detailed 6BI02 knowledge:** The students will study the specification of Edexcel 6BI02 alongside extensive practice of examination style questions to help them retain the content of the specification. The students will receive detailed 6BI02 notes prepared by BioChem Tuition.

Key features

- ✓ 6BI02 specification notes.
 - ✓ 6BI02 examination style past examination questions.
 - ✓ 1-2-1 help in understanding the key examiner points.
 - ✓ Revision notes and charts to aid revision.
2. **Practice Edexcel past examination papers (1995-2014):** The students will complete at least 14 years of Edexcel past exam papers. BioChem Tuition will provide all the past papers in printed form to the students. The students are required to complete past papers, which are checked and marked in light of the official examiner report and mark scheme. The mistakes will be followed up to ensure they are not repeated. The students will be shown how to maximise their marks by following our exam technique and also methods to improve comprehension of scientific questions.

Key features

- ✓ 14 years of past examination papers practice.
 - ✓ 1-2-1 help in understanding the exam technique.
 - ✓ Revisit the mistakes and practice relevant questions to ensure the mistakes are not repeated.
 - ✓ Past paper practice can be extended by solving 6BI02 style questions from AQA, CIE and OCR exam boards.
3. **Mock examination practice:** Mock 6BI02 examination practice to give student feedback on the likely grade achievable in the exams.

Key features

- ✓ Mock examination practice to simulate exam experience, which will be marked, graded and feedback on mistakes provided.

How To Achieve Grade 'A' or 'A*'
6BI02: Development, Plants and Environment

Intensive tutoring	Past papers practice (1995-2014)	Mock examination practice
1. Cover 6BI02 Specification 2. Practice examination style questions	1. Solve 6BI02 past papers. 2. Revisit the mistakes/revise topics	1. Solve mock examination papers to prepare for the exam

6BI02 Tuition Plan

Tuition Plan - 6BI02: Development, Plants & the Environment	
Stage 1: Specification Topics	Tuition time
Module 1: <i>The voice of the genome</i>	12 hours
<ul style="list-style-type: none"> • Eukaryotic and prokaryotic cells. • Ultrastructure of animal cell and recognition of the organelles through electron micrograph images. • The role of rough ER and Golgi apparatus in protein transport. • Organization of cells into tissues, organs and organs into systems. • Role of mitosis and cell cycle for growth and asexual reproduction. • Stages of mitosis, preparation and staining of root tips to observe the stages of mitosis. • Gametes and the adaptability to their function. • Process of fertilization in mammals and flowering plants. • Stem cells and their use in medical therapies. • Plant tissue culture techniques. • Differentiation process in the animal cells. • Polygenic inheritance, continuous and discontinuous variation. 	6 hour
<ul style="list-style-type: none"> • Practice of past examination style questions on the voice of genome. 	6 hour

Module 2: Biodiversity and natural resources	12 hours
<ul style="list-style-type: none"> • Ultrastructure of plant cells and comparison of the structure to the animal cells. • Compare the structure and function of polysaccharides in starch and cellulose. • Arrangement of microfibrils in plant cell walls, stem support tissues, xylem and phloem vessels as seen in light microscope. • Experiment to determine the tensile strength of the plant fibers. • The role of mineral ions to plants. • Investigating mineral deficiencies and antimicrobial properties of plants. • Testing drugs – double blind trials, placebo; three-phased testing. • Measuring habitat using species richness a in species using genetic diversity. • Ecological niche and adaptation of organisms to their environment. • Natural selection leads to adaptation and selection. • Taxonomic groups based on three domains. • Methods used by zoos and seed banks in the conservation of genetic diversity (e.g. scientific research, captive breeding and reintroduction programs). 	6 hours
<ul style="list-style-type: none"> • Practice of past examination style questions on biodiversity and natural resources. 	6 hours

Stage 2: Past paper practice (1995-2014)	10 hours
<ul style="list-style-type: none">• Practice of past examination papers from 1995 to 2014 relevant to 6BI02: Development, plants and the environment.<ul style="list-style-type: none">✓ At least 10 years of past examination papers practice.✓ 1-2-1 help in understanding the exam technique.✓ Revisit the mistakes and practice relevant questions to ensure the mistakes are not repeated.✓ Past paper solving 6BI02 style questions from other exam boards such as AQA, CIE and OCR can extend practice.	10 hours