

Revision Checklist: GCSE AQA Biology (Higher Tier)

	1. CELL BIOLOGY	<u>Subject Knowledge</u> (tick as appropriate)	<u>Practice Questions</u> (tick as appropriate)
a.	Eukaryotes & prokaryotes		
b.	Animal & plant cells		
c.	Cell specialisation		
d.	Microscopy		
e.	Culturing microorganisms		
f.	The cell cycle		
g.	Stem cells		
h.	Diffusion		
i.	Exchange surfaces		
j.	Osmosis		
k.	Active transport		

	2. ORGANISATION	<u>Knowledge</u>	<u>Practice</u>
a.	Cells, tissues, organs and systems		
b.	Enzymes		
c.	Human digestive system		
d.	The lungs		
e.	The heart		
f.	Blood vessels		
g.	Blood		
h.	Coronary heart disease		
i.	Health & disease		
j.	Risk factors for non-communicable diseases		
k.	Cancer		
l.	Plant tissues		
m.	Transpiration & translocation		
n.	Adaptations of plant cells		
o.	Rate of transpiration		

	3. INFECTION & RESPONSE	<u>Knowledge</u>	<u>Practice</u>
a.	Communicable diseases		
b.	Viral diseases		
c.	Bacterial diseases		
d.	Fungal diseases		
e.	Protist diseases		
f.	Human defence systems		
g.	Vaccination		
h.	Antibiotics & painkillers		
i.	Discovery of drugs		
j.	Drug tests & trials		
k.	Monoclonal antibodies		
l.	Plant diseases		
m.	Plant defences		

	4. BIOENERGETICS	<u>Knowledge</u>	<u>Practice</u>
a.	Photosynthesis		
b.	Rate of photosynthesis		
c.	Uses of glucose		
d.	Aerobic & anaerobic respiration		
e.	Body's response to exercise		
f.	Metabolism		

	5. HOMEOSTASIS & RESPONSE	<u>Knowledge</u>	<u>Practice</u>
a.	Homeostasis		
b.	The reflex arc		
c.	The brain		
d.	Structure of the eye		
e.	Accommodation & eye defects		
f.	Body temperature control		
g.	The endocrine system		
h.	Blood glucose control		
i.	Diabetes		
j.	The kidneys		
k.	Hormones in reproduction		
l.	The menstrual cycle		
m.	Contraception		
n.	Treating infertility		
o.	Thyroxine and adrenaline		
p.	Plant hormones and uses		

	6. INHERITANCE, VARIATION & EVOLUTION	<u>Knowledge</u>	<u>Practice</u>
a.	Sexual & asexual reproduction		
b.	Meiosis		
c.	DNA structure		
d.	The genome		
e.	Protein synthesis		
f.	Mutations		
g.	Alleles & inheritance		
h.	Inherited disorders		
i.	Sex determination		
j.	Variation		
k.	Selective breeding		
l.	Genetic engineering		
m.	Cloning		
n.	The theory of evolution		
o.	Speciation		
p.	The work of Mendel		
q.	Fossils		
r.	Extinction		
s.	Antibiotic resistant bacteria		
t.	Classification of organisms		

7. ECOLOGY		<u>Knowledge</u>	<u>Practice</u>
a.	Communities & interdependence		
b.	Abiotic & biotic factors		
c.	Adaptations		
d.	Food chains & webs		
e.	Predator-prey cycles		
f.	Carbon and water cycle		
g.	Decomposition		
h.	Distribution of species		
i.	Biodiversity		
j.	Waste management		
k.	Land use & deforestation		
l.	Global warming		
m.	Maintaining biodiversity		
n.	Trophic levels		
o.	Pyramids of biomass		
p.	Food security		
q.	Farming techniques		
r.	Sustainable fishing		
s.	Biotechnology		

ASSESSMENTS	<u>Duration</u>	<u>Marks</u>	<u>Topics</u>
Paper 1	1 hour 45 minutes	100 marks	Topics 1 – 4
Paper 2	1 hour 45 minutes	100 marks	Topics 5 - 7

PRACTICALS	<u>Knowledge</u>
RP 1: "Make use of a light microscope to observe, draw and label plant and animal cells."	
RP 2: "Investigate the effect of antibiotics or antiseptics on the growth of bacteria in agar plates and measure zones of inhibition."	
RP 3: "Investigate the effect of different concentrations of salt or sugar solutions on the mass of plant tissue."	
RP 4: "Make use of reagents to test for the presence of different carbohydrates, lipids and proteins."	
RP 5: "Investigate the effect of pH on the rate of reaction of amylase."	
RP 6: "Investigate the effect of light intensity on the rate of photosynthesis of an aquatic plant."	
RP 7: "Investigate the effect of a specific factor on human reaction time."	
RP 8: "Investigate the effect of light or gravity on the growth of newly germinated seedlings."	
RP 9: "Use sampling techniques to investigate the effect of a specific factor on the distribution of a species in a habitat."	
RP 10: "Investigate the effect of temperature on the rate of decay of fresh milk by measuring pH change."	