

In your final exam you will have an essay question which will be introduced like this...

Write an essay on *one* of the topics below

EITHER

a.

OR

b.

You should write your essay in continuous prose.

- Your essay will be marked for its scientific accuracy. It will also be marked for your selection of relevant material from different parts of the specification and from the quality of your written communication.

The maximum number of marks that can be awarded is:

- Scientific content 16
- Breadth of knowledge 3
- Relevance 3
- Quality of written communication 3
-

There will be the equivalent of two and a half A4 sides to write on (you can always ask for more paper but they always leave plenty of space for you to score full marks)

General Principles for Marking the Essay

Four **skill areas** will be marked: scientific content, breadth of knowledge, relevance and quality of language.

The following descriptions will form a basis for marking.

Scientific Content (maximum 16 marks)

Category	Mark	Descriptor
Good	16	Most of the material of a high standard reflecting a comprehensive understanding of the principles involved and a knowledge of factual details fully in keeping with a programme of A level study. Some material, however, may be a little superficial. Material is accurate and free from fundamental errors but there may be minor errors, which detract from the overall accuracy.
	14	
	12	
Average	10	A significant amount of the content is of an appropriate depth, reflecting the depth of treatment expected from a programme of A level study. Generally accurate with few, if any fundamental errors. Shows a sound understanding of most of the principles involved.
	8	
	6	
Poor	4	Material presented is largely superficial and fails to reflect the depth of treatment expected from a programme of A level study. If greater depth of knowledge is demonstrated, then there are many fundamental errors.
	2	
	0	

Breadth of Knowledge (maximum 3 marks)

Mark	Descriptor
3	A balanced account making reference to most if not all areas that might realistically be covered on an A level course of study.
2	A number of aspects covered but a lack of balance. Some topics essential to an understanding at this level not covered.
1	Unbalanced account with all or almost all material based on a single aspect.
0	Material entirely irrelevant.

Relevance (maximum 3 marks)

Mark	Descriptor
3	All material presented is clearly relevant to the title. Allowance should be made for judicious use of introductory material.
2	Material generally selected in support of title but some of the main content of the essay is of only marginal relevance.
1	Some attempt made to relate material to the title but considerable amounts largely irrelevant.
0	Material entirely irrelevant or too limited in quantity to judge.

Quality of Language (maximum 3 marks)

Mark	Descriptor
3	Material is logically presented in clear, scientific English. Technical terminology has been used effectively and accurately throughout.
2	Account is logical and generally presented in clear, scientific English. Technical terminology has been used effectively and is usually accurate.
1	The essay is generally poorly constructed and often fails to use an appropriate scientific style and terminology to express ideas.
0	Material entirely irrelevant or too limited in quantity to judge.

Total 25 marks

Some sample essay titles that have previously been used:

- Cycles in Biology
- How Bacteria affect Human Lives
- How microorganisms can benefit humans
- The functions of mineral ions in plants and animals
- How the structure of different cells is related to their function
- The effect of temperature on living organisms and the processes which occur in them
- Relationships between different species of organisms
- The importance of osmosis in plants and animals
- The ways in which genes and the environment contribute to variation
- How different organisms obtain the element nitrogen
- The functions of cell-surface membranes
- The ways in which genes and environment effects phenotype of an organism
- The part played by microorganisms in nutrient cycles
- The similarities and differences between nervous and hormonal control in animals
- The passage of water through plants
- The effect of ecological conditions on the distribution of organisms
- The functions of proteins
- Homeostasis in a mammal
- How the body of a mammal obtains nutrients before and after birth
- Energy flow through ecosystems
- How light affects living organisms
- The importance of carbohydrates in living organisms
- The functions of blood
- The advantages and disadvantages of living in water
- The adaptations of parasites to their way of life
- The genetic code
- The relation between the structure of different cells and their functions
- Support and movement in living organisms
- Applications and implications of gene technology
- Roles of pigments in living organisms
- Control of the internal environment in living organisms
- The role of enzymes in living organisms
- Gas exchange in animals and flowering plants
- Lipids in living organisms
- Chemical coordination in plants and animals
- The movement of molecules and ions through membranes
- The chemical and biological control of insect pests
- Transport systems in mammals and flowering plants
- ATP and its roles in living organisms
- Production and elimination of waste products in animals
- The role of water in the lives of organisms
- The factors affecting the growth and size of populations
- The functions of proteins in plants and animals
- Natural selection and the effects of environmental change