



Quality Assessment Tasks

NAME: _____

VCE® BIOLOGY

UNITS 3 & 4 Practice Written Examination

QUESTION AND ANSWER BOOK

Reading time: 15 minutes

Writing time: 2 hours 30 minutes

Structure of book

<i>Section</i>	<i>Number of Questions</i>	<i>Number of Questions to be answered</i>	<i>Number of Marks</i>
A	40	40	40
B	11	11	80
			Total 120

- Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners and rulers.
- Students are NOT permitted to bring into the examination room: blank sheets of paper and/or white out liquid/tape.
- No calculator is allowed in this examination.

Materials supplied

- Question and answer book of 37 pages.
- Answer sheet for multiple-choice questions.

Instructions

- Write your **student name** in the space provided above on this page.
- Detach the answer sheet for multiple-choice questions during reading time.
- Write your **name** on your answer sheet for multiple-choice questions.
- All written responses must be in English.

At the end of the examination

- Place the answer sheet for multiple-choice questions inside the front cover of this book.

Students are NOT permitted to bring into the examination room mobile phones and/or any other unauthorised electronic devices.

SECTION A - Multiple Choice Questions**Instructions for Section A**

Answer **all** questions in pencil on the answer sheet provided for multiple-choice questions.

Choose the response that is **correct** for the question.

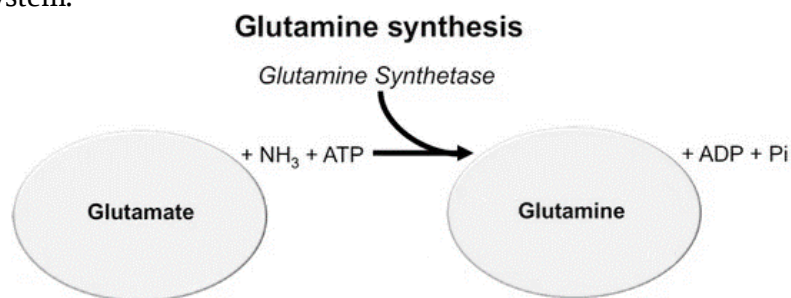
A correct answer scores 1, an incorrect answer scores 0.

Marks will **not** be deducted for incorrect answers.

No marks will be given if more than one answer is completed for any question.

Use the following information to answer Questions 1 and 2.

Glutamine is an amino acid that the body can synthesise from Glutamate (also an amino acid). The body is able to synthesise some of the amino acids that might be missing from a person's diet as shown in the diagram below. Glutamine is needed as an important signalling molecule in the nervous system.



source: <https://www.mdpi.com/>

Question 1

The structural part that is different between glutamate and glutamine includes the

- A. amine group.
- B. carboxyl group.
- C. R group.
- D. third phosphate group.

Question 2

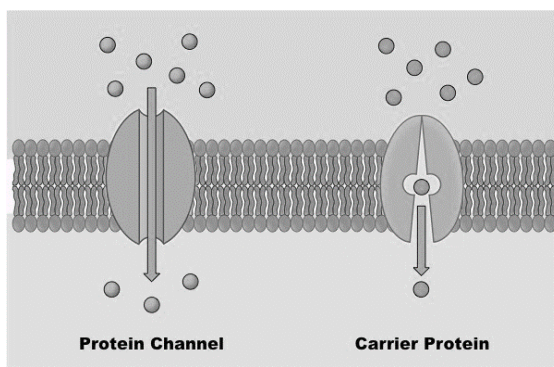
A possible role for the reaction in the diagram might include

- A. ATP synthesis.
- B. signalling by neurotransmitters.
- C. inhibiting transcription.
- D. enzymes.

Question 3

Which of the following molecules is the smallest?

- A. Pre-messenger RNA.
- B. Final messenger RNA.
- C. DNA in a chromosome.
- D. Transfer RNA.

Question 4

Source: <https://ib.bioninja.com.au/>

The similarity between a protein channel and a carrier protein shown in the diagram is that both

- A. have a fixed structure.
- B. are transport proteins.
- C. are composed of lipids.
- D. can actively transport hydrophilic molecules.

Question 5

Which of the following processes does not require energy?

- A. Facilitated diffusion.
- B. Transcription.
- C. Endocytosis.
- D. Active transport.

Question 6

In post-translational modification which of the following may occur?

- A. Transfer RNA brings an amino acid to the ribosome.
- B. Stop codons terminating the polypeptide production.
- C. Introns spliced out.
- D. Enzymes altering the folded shape of the protein.

Question 7

In RNA, uracil pairs with

- A. adenine.
- B. cytosine.
- C. thymine.
- D. guanine.

Question 8

In a condensation polymerisation reaction which of the following is required?

- A. Water.
- B. ATP.
- C. Co-enzyme A.
- D. Products.

Question 9

Which of the following statements about signalling molecules is correct?

- A. Hormones can only travel in the bloodstream.
- B. Neurotransmitters are released by glands.
- C. Pheromones are only released by insects.
- D. Cytokines are signalling molecules.

Question 10

Source: <https://www.pathwayz.org/>

In the diagram above, the level of protein structure shown is

- A. primary.
- B. secondary.
- C. tertiary.
- D. quaternary.

Question 11

A factor that cannot alter the rate of photosynthesis is

- A. light availability.
- B. carbon dioxide concentration.
- C. temperature.
- D. glucose concentration.

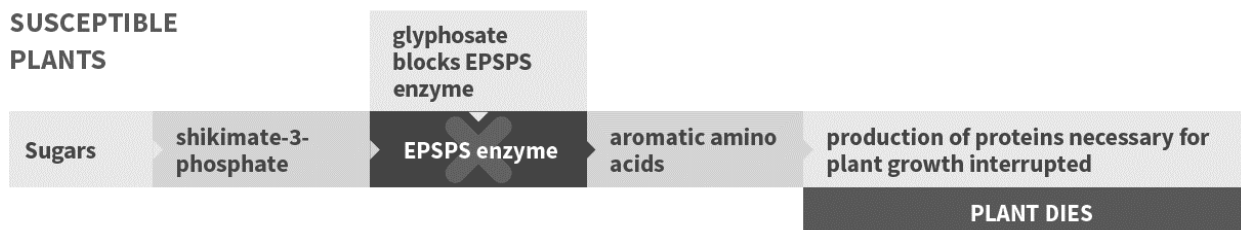
Question 12

Which of the following is correct regarding photosynthesis?

- A. NAD carries hydrogen to the light-dependent stage.
- B. NAD carries hydrogen to the light-independent stage.
- C. ATP is produced in the light-dependent stage.
- D. Glucose is produced in the light-dependent stage.

Use the following information to answer Questions 13 and 14.

Roundup Ready canola (rrCanola) has been genetically modified to be resistant to the herbicide Roundup. Roundup contains an inhibitor called glyphosate that blocks an important enzyme 5-enolpyruvylshikimate 3-phosphate (EPSPS). EPSPS acts to inhibit aromatic amino acid production which is essential for plant growth in susceptible (non GMO) plants. The rrCanola can produce an alternative EPSPS enzyme that is not affected by the Roundup.



Source: <https://www.roundupreadycanola.com.au/>

Question 13

From this information it is reasonable to conclude that

- A. EPSPS enzymes in Roundup ready canola have no active site.
- B. Roundup inhibitors cannot bind to the EPSPS enzyme in normal plants.
- C. EPSPS speeds up the production of aromatic amino acids.
- D. gibberellin cannot be produced in rrCanola.

Question 14

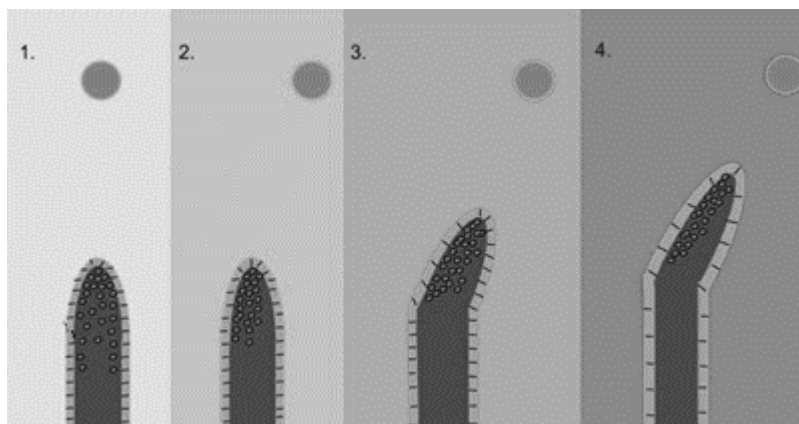
The original substrate for the reaction would be made by

- A. condensation polymerisation.
- B. translation.
- C. cellular respiration.
- D. cofactors forming prosthetic groups.

Question 15

Which of the following responses is correct?

Respiration Summary Table			
	Stage	Location	ATP Produced
A.	Glycolysis	Inner mitochondria	2
B.	Krebs Cycle	Cytosol	2
C.	Electron Transport	Cristae	32
D.	Fermentation	Mitochondria	2

Question 16

The diagram above shows a progression of a plant growing over 4 consecutive days towards a circular light source. The hormone likely responsible is

- A.** auxin.
- B.** florigen.
- C.** ethylene.
- D.** cytokinin.

Question 17

Cells of the immune system that respond to allergens such as pollen

- A. are mast cells that produce antibodies.
- B. can reduce inflammation.
- C. would have high numbers of Golgi Apparatus.
- D. are concentrated in the lymph nodes.

Question 18

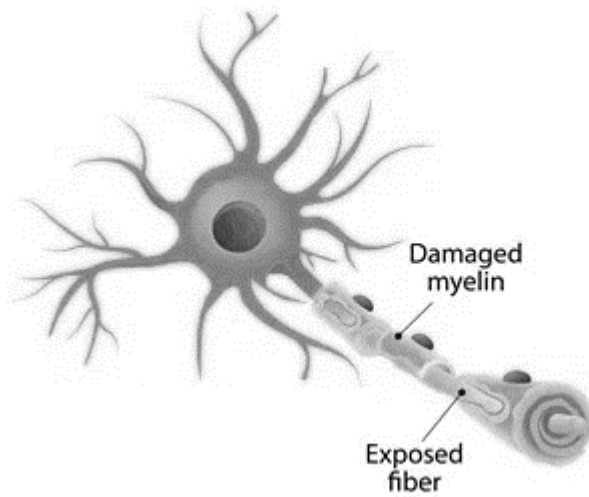
Monoclonal antibodies can

- A. kill virus infected cells.
- B. deliver toxic drugs to cancer cells.
- C. prevent a skin cancer from forming.
- D. induce apoptosis.

Question 19

What type of immunity is achieved by a mother kangaroo giving milk to its joey?

- A. Artificial passive.
- B. Artificial active.
- C. Natural passive.
- D. Natural active.

Question 20

source: <https://www.news-medical.net>

The cell above might be taken from a patient with

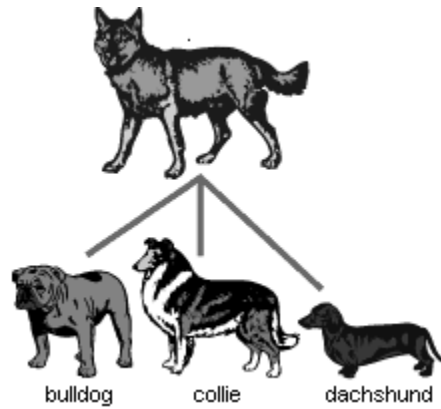
- A. hypersensitivity.
- B. an autoimmune disease.
- C. an immune deficiency disease.
- D. cancer.

Question 21

Which term best describes the geographical distribution of species?

- A. Mass extinction.
- B. Biogeography.
- C. Comparative morphology.
- D. Genetic drift.

Use the following information to answer Questions 22 and 23.



Source: <https://evolution.berkeley.edu>

Question 22

The outcome shown in the image above could result from

- A. natural selection.
- B. allopatric speciation.
- C. A bottleneck.
- D. artificial selection.

Question 23

The variation in the dog varieties could have arisen due to

- A. selection pressures.
- B. human manipulation.
- C. the founder effect.
- D. random mutations.

Use the following information to answer Questions 24 to 26.

A sequence of amino acids, forming part of a biomolecule is shown below.

– cys – ser – arg – gly – gln – ala –

Universal Genetic Code Chart
Messenger RNA Codons and Amino Acids for Which They Code

		Second base				
		U	C	A	G	
First base	U	UUU } PHE UUC } UUA } LEU UUG }	UCU } UCC } SER UCA } UCG }	UAU } TYR UAC } UAA } STOP UAG }	UGU } CYS UGC } UGA } STOP UGG } TRP	U C A G
	C	CUU } CUC } LEU CUA } CUG }	CCU } CCC } PRO CCA } CCG }	CAU } HIS CAC } CAA } GLN CAG }	CGU } CGC } ARG CGA } CGG }	U C A G
	A	AUU } AUC } ILE AUA } AUG } MET or START	ACU } ACC } THR ACA } ACG }	AAU } ASN AAC } AAA } LYS AAG }	AGU } SER AGC } AGA } ARG AGG }	U C A G
	G	GUU } GUC } VAL GUA } GUG }	GCU } GCC } ALA GCA } GCG }	GAU } ASP GAC } GAA } GLU GAG }	GGU } GGC } GLY GGA } GGG }	U C A G

Source: <http://mrsebiology75.weebly.com>

Question 24

The mRNA sequence for the amino acid sequence given is

- A. ACGUGAGCCCCAGUCCGA.
- B. UGGAGUCGCCGUCAGCGU.
- C. UGCAGUCGGGGUCAGGCU.
- D. ACGTGAGCCCCAGTCCGA.

Question 25

The resulting sequence of amino acids, because of a deletion point mutation of the 7th nucleotide, would be

- A. – cys – ser – gly – val – ser –
- B. – cys – arg – gly – gln – ala –
- C. – cys – ser – STOP
- D. – cys – ser – arg – gly – gln – ala –

Question 26

Substitution of the 3rd nucleotide from the original sequence with an adenine will result in which of the following types of mutation?

- A. Nonsense.
- B. Deletion.
- C. Missense
- D. Silent.

Use the following information to answer Questions 27 and 28.

Cheetahs are at risk of extinction despite being incredibly fast and successful predators that are able to run at speeds up to 120 km/h. The gene pool of cheetahs in Africa suggests that they are extremely inbred and, as a result, are very genetically similar to each other.

Question 27

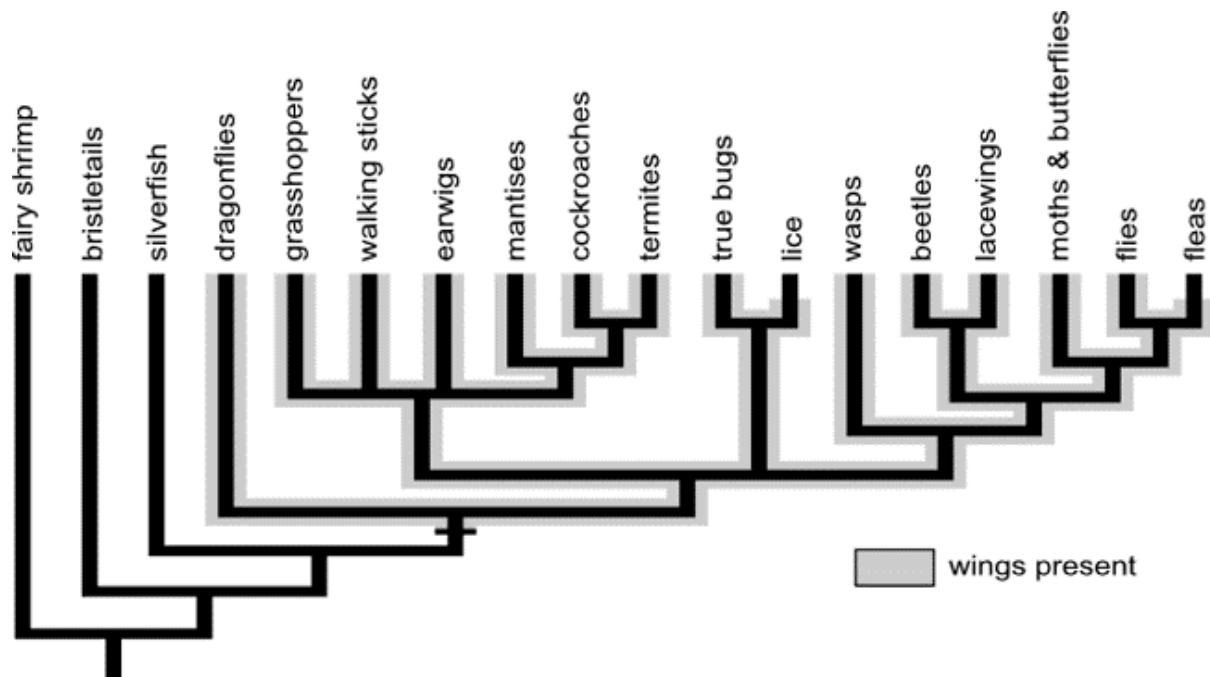
The genetical similarity is most likely a result of

- A. gene flow.
- B. the founder effect.
- C. migration.
- D. a population bottleneck.

Question 28

The event identified in Question 27 was mostly caused by

- A. competition.
- B. hunting.
- C. the Precambrian Ice Age.
- D. disease.

Question 29

Source: <https://evolution.berkeley.edu>

The organisms that most recently shared a common ancestor are

- A. flies and moths.
- B. cockroaches and termites.
- C. grasshoppers, walking sticks and earwigs.
- D. fleas and lice.

Question 30

DNA-DNA hybridisation can be used to measure the relatedness between species. This process

- A. measures the temperature of separation of DNA.
- B. compares the amino acid sequences.
- C. involves cross breeding of species.
- D. produces a genetically modified organism.

Question 31

BMP4 is

- A. a gene that can control bone development in finches.
- B. a structural gene.
- C. a protein that can control cartilage development in cichlids.
- D. a regulatory enzyme.

Question 32

The positioning of newly discovered *Homo* species on the evolutionary tree is not agreed upon by all scientists. Which of the following is NOT a reason why different interpretations of findings can be made?

- A. Fossils are often only small fragments.
- B. Previous placements of species cannot be challenged.
- C. New discoveries are made.
- D. There are gaps in the fossil record.

Question 33

Endonuclease recognition sites

- A. are always read left to right.
- B. can be found on DNA and RNA.
- C. start with CTG.
- D. are specific to each restriction enzyme.

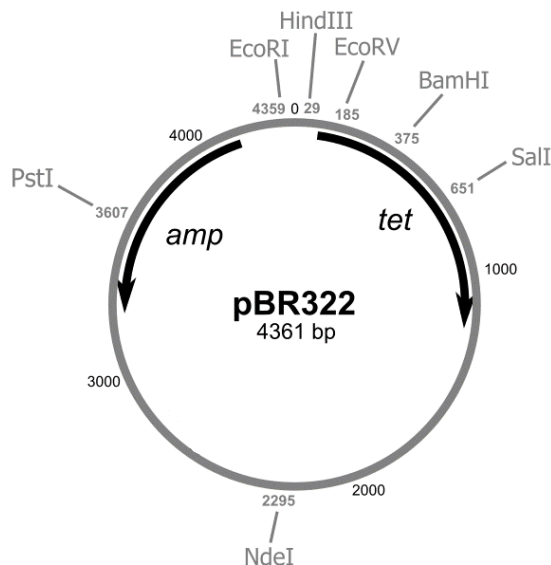
Question 34

Plasmids can be used to

- A. determine the DNA nucleotide sequence of a gene.
- B. join complementary sticky ends.
- C. find a complementary nucleic acid sequence.
- D. transport foreign genes.

Question 35

The following plasmid shows the cutting sites of various endonucleases (restriction enzymes). It also shows the location of two genes needed for resistance to two antibiotics, ampicillin and tetracycline, listed as 'amp' and 'tet' respectively.



Source: wikimedia.org

From the diagram, it would be reasonable to conclude that

- A. adding EcoR1 would produce 2 DNA fragments.
- B. there are no NdeI cutting sites.
- C. cutting with EcoRV would reduce tetracycline resistance.
- D. there are 4361 nucleotides of DNA in this plasmid.

Question 36

Newborn babies undergo genetic screening shortly after birth. A blood sample is taken and analysed for the presence of genetic disorders. A benefit of this genetic screening process is

- A.** the presence of an allele for the disease does not mean the individual will display symptoms of the disease.
- B.** parents can find out their carrier status before having a baby.
- C.** an increased emotional burden on parents.
- D.** Early medical intervention if the baby tests positive for a disorder.

Use the following information to answer Questions 37 and 38.

Relenza is a drug developed by the process of rational drug design, to inhibit neuraminidase in the management of influenza.

Question 37

Relenza is

- A. a treatment option for various pathogens.
- B. flexible to allow it to bind to various influenza proteins.
- C. complementary in shape to a specific influenza protein.
- D. effective in the breakdown of the cell wall of influenza.

Question 38

The map below shows the proportions of influenza strains and infection rates.



Source: <https://www.who.int/>

Influenza is best described as a

- A. viral pandemic.
- B. viral epidemic.
- C. bacterial pandemic.
- D. bacterial epidemic.

Use the following information to answer Questions 39 and 40.

Golden rice is a modified version of white rice that has been engineered to provide beta-carotene which is a precursor to vitamin A. Vitamin A is needed for eye health, and is lacking in the diets of some populations in developing countries. The beta carotene genes have been isolated and extracted from daffodil plants and a bacterium found in soil.

Question 39

Golden rice can be described as

- A. genetically modified, but not transgenic.
- B. transgenic, but not genetically modified.
- C. both transgenic and genetically modified.
- D. neither transgenic nor genetically modified.

Question 40

A social implication of golden rice is

- A. access of the seeds to poorer farmers.
- B. the vitamin A precursors in plants might interfere with beneficial insects.
- C. potential gene flow of the vitamin A precursors to non-golden rice crops.
- D. the labelling laws of the final product.

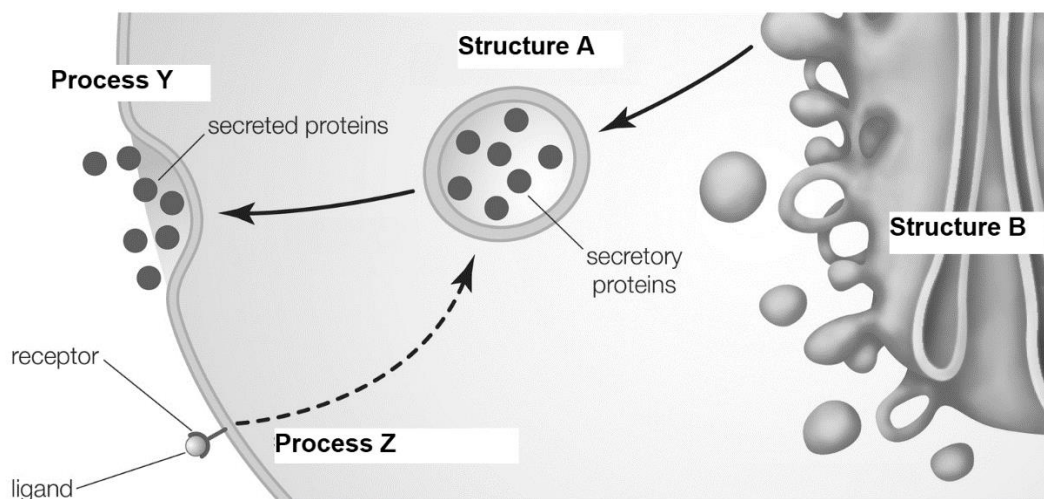
SECTION B – Short Answer Questions**Instructions for Section B**

Answer this section in **pen**.

Answer **all** questions in the spaces provided.

Question 1 (4 marks)

The following diagram shows processes that occur within a cell



a. Name the structures and processes labelled on the diagram

2 marks

Process Y: _____

Process Z: _____

Structure A: _____

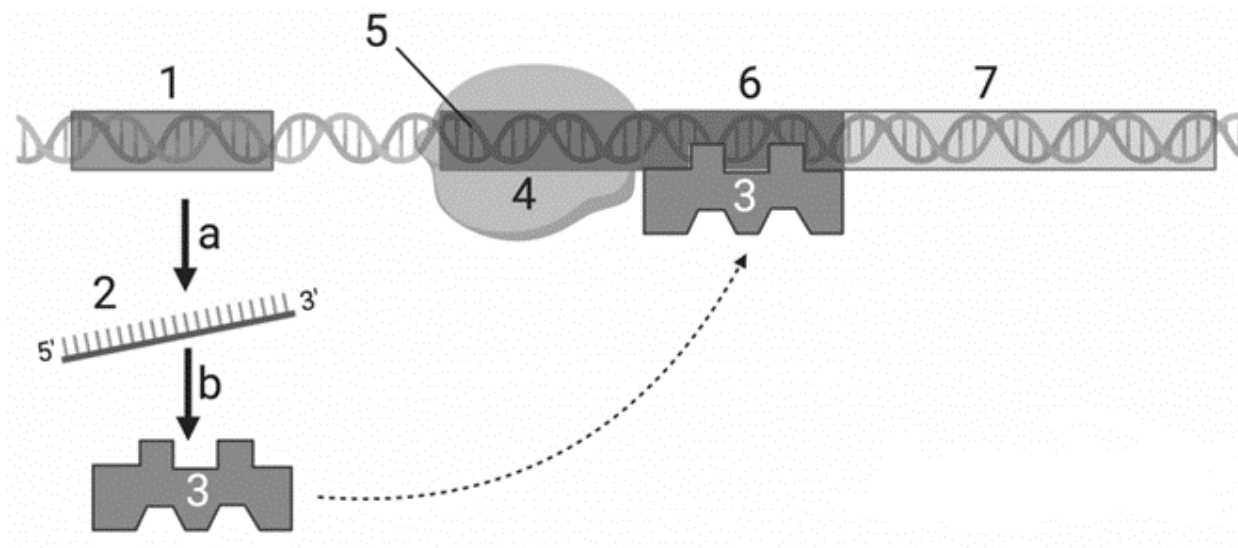
Structure B: _____

b. Explain how process Z can impact process Y.

2 marks

Question 2 (11 marks)

In 1961 French scientists discovered that bacteria produced enzymes only when needed. The *lac* operon is found in organisms such as E-coli. If the preferred energy source, glucose, is unavailable then the organism can produce enzymes to break down lactose instead. The enzymes produced are β -galactosidase, permease and transacetylase.



Source: <https://sciencemusicvideos.com/>

- a. Complete the following table to name the numbered parts of the diagram, their chemical composition and function. 3 marks

Name	DNA, RNA or Protein	Function
1.		
2.		
3.		

- b. Draw and label a molecule of lactose on the diagram 1 mark

- c. State 2 molecules that would need to be present to begin the expression of the enzymes needed to breakdown lactose. 2 marks

- d. Explain the steps that would occur in the *lac* operon for permease expression to begin once lactose is present. 2 marks

- e. In the diagram provided explain what occurs in process 'b'. 3 marks

Question 3 (6 marks)

During the first billion years of Earth's existence, there was no oxygen present and early bacteria obtained their energy by fermentation. Scientists have isolated the enzyme that facilitates this process found in some bacteria, such as *Thermotoga maritima*. *Thermotoga maritima* is found in geothermal marine environments and lives at temperatures up to 90°C. Its DNA polymerase called *Tma* DNA polymerase, functions most efficiently at 90°C.

- a. Explain what would happen to the *Tma* DNA polymerase at the molecular level and what effect this would have on the rate of reaction at 0°C and 180°C. 2 marks

- b. The process of cellular respiration has differentiated over time and varies based on the type of cell and organism in which it occurs.

Complete the table to identify the two inputs and two outputs of anaerobic respiration in yeasts. 2 marks

Inputs	Outputs
1.	1.
2.	2.

- c. Describe two pieces of evidence for the bacterial origin of mitochondria. 2 marks

Question 4 (11 marks)

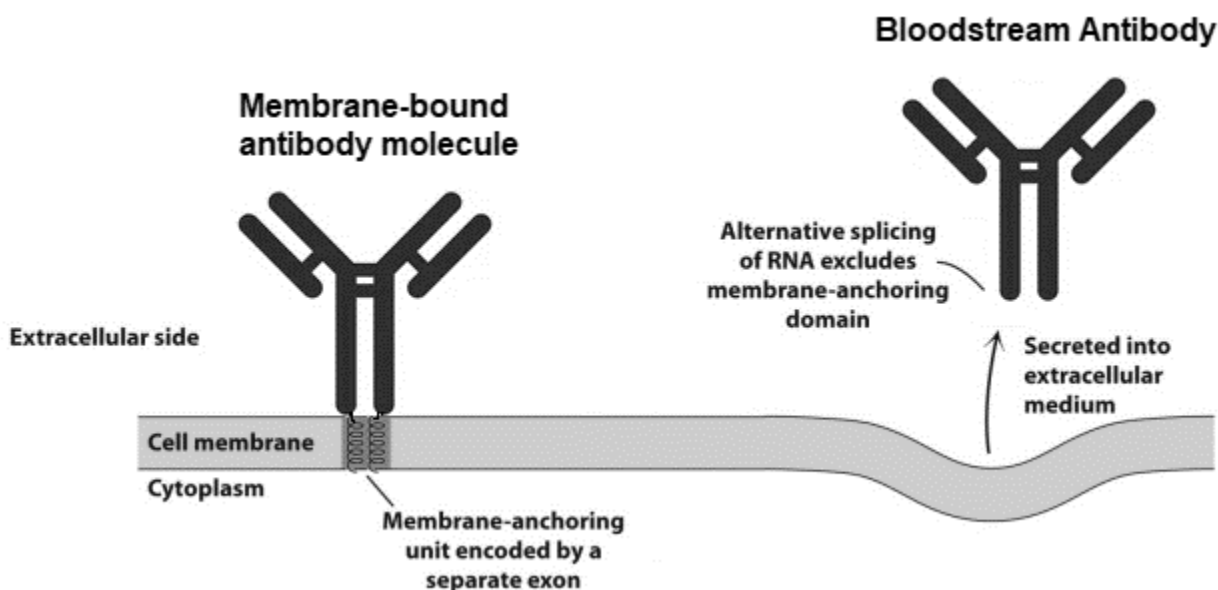
The B plasma cells produce millions of identical antibodies that can ‘stick’ to a specific invading pathogen, but some types are also able to stick to the B plasma cell itself

- a. What is the chemical composition of antibodies? 1 mark
-

B plasma cells need to produce two slightly different types of antibodies:

- **Membrane-bound antibodies** attach to the membrane surface.
- **Bloodstream antibodies** are released from the B plasma cell to travel in the bloodstream. These antibodies need to travel, find a pathogen and bind to it.

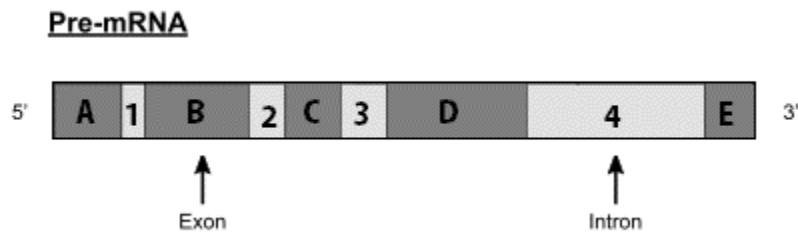
To achieve the production of both types of antibodies with minimal energy, both ‘membrane-bound’ and ‘bloodstream’ antibodies are produced by the same gene.



The first coding region of the pre-mRNA produces the variable region of the antibody. The next regions code for the constant region that is the same for all antibody molecules.

The last two coding regions code for a hydrophobic region of the protein, that can produce a membrane anchor. This allows this type of antibody to attach itself into the membrane. This region may be included or excluded from the final mRNA product.

- b. Name and describe the process that allows for the gene coding for the bloodstream antibodies to be different from the membrane-bound. 2 marks



- c. Based on the diagram above draw the final mRNA for both the membrane bound and bloodstream antibody.

4 marks

Membrane bound	Bloodstream

- d.** Explain how the chemical properties of the bloodstream antibody allow it to be more suited to its function. 2 marks

- e.** Explain which type of antibody a naïve B cell would produce. Justify your choice. 2 marks

Question 5 (9 marks)

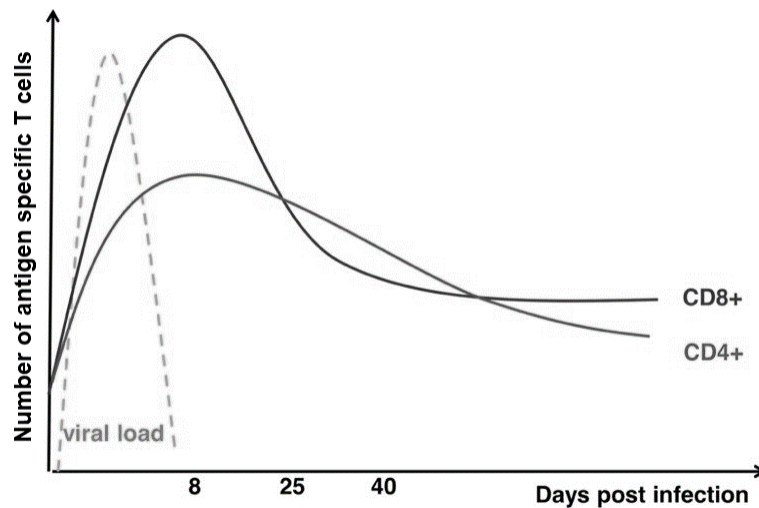
Humans are prone to infection with respiratory viruses such as respiratory syncytial virus (RSV). RSV is extremely contagious and is particularly common and severe, even fatal, in children under the age of 2. Adults with heart or respiratory conditions are also at an increased risk of severe RSV infection, while otherwise healthy adults are likely to have only mild symptoms. Infected individuals experience flu like symptoms including a runny nose, cough and fever.

- a.** Explain the role of interferon in the immune response against RSV. 1 mark

- b.** Scientists are currently working on the development and trials of a vaccine for RSV. Explain how a vaccine being given to the public could create herd immunity and why it would be particularly important in the prevention of RSV. 2 marks

- c.** Apart from vaccinations, suggest two ways in which families can reduce the risk of RSV in their babies. 2 marks

The graph below shows the viral load compared to CD4+ and CD8+ cytotoxic T cells.



Source: <https://www.researchgate.net/>

- d. Describe the relationship between the viral load and CD4+ cytotoxic T cells from days 1 to 8 and from days 8 to 40. 2 marks

- e. Cytotoxic T cells can induce apoptosis in cells that are infected with RSV. Outline two steps of the process of apoptosis after initiation in this situation. 2 marks

Question 6 (8 marks)

Polymerase Chain Reactions (PCR) are able to identify if specific DNA sequences found in *E.coli* (*Escherichia coli*) are present. As PCR will work regardless of whether the bacteria present are dead or alive it is not possible to accurately determine the rate of *E.coli* growth using PCR alone. DNA crosslinking reagents like Ethidium monoazide (EMA), that can only penetrate dead bacteria, will bind to the DNA inside. Once inside it can prevent PCR from occurring.

- a.** What commercial applications might exist for using Ethidium monoazide together with Polymerase Chain Reactions? 2 marks

- b.** What can be determined about the molecular structure and the chemical properties of ethidium monoazide? 2 marks

- c.** Describe the repeated steps of PCR. 2 marks

- d. The following samples of E.coli DNA completed 5 cycles of PCR.

Complete the table to show the amounts of DNA present at the end of the PCR process if one DNA fragment is used.

2 marks

DNA SAMPLE	Ethidium monoazide present or absent	Fragments of DNA present at end of PCR
Living E.coli sample of single-stranded DNA	Present	
Dead E.coli sample of double-stranded DNA	Present	
Living E.coli sample of single-stranded DNA	Absent	
Dead E.coli sample of double-stranded DNA	Absent	

Question 7 (8 marks)

Sharks belong to the taxonomic group of cartilaginous fish, having a skeleton consisting of cartilage, and teeth that are covered with a hard, highly mineralised layer. Many shark species shed their teeth and these teeth are continuously replaced throughout the shark's life. The fossilisation of complete shark specimens is very rare.

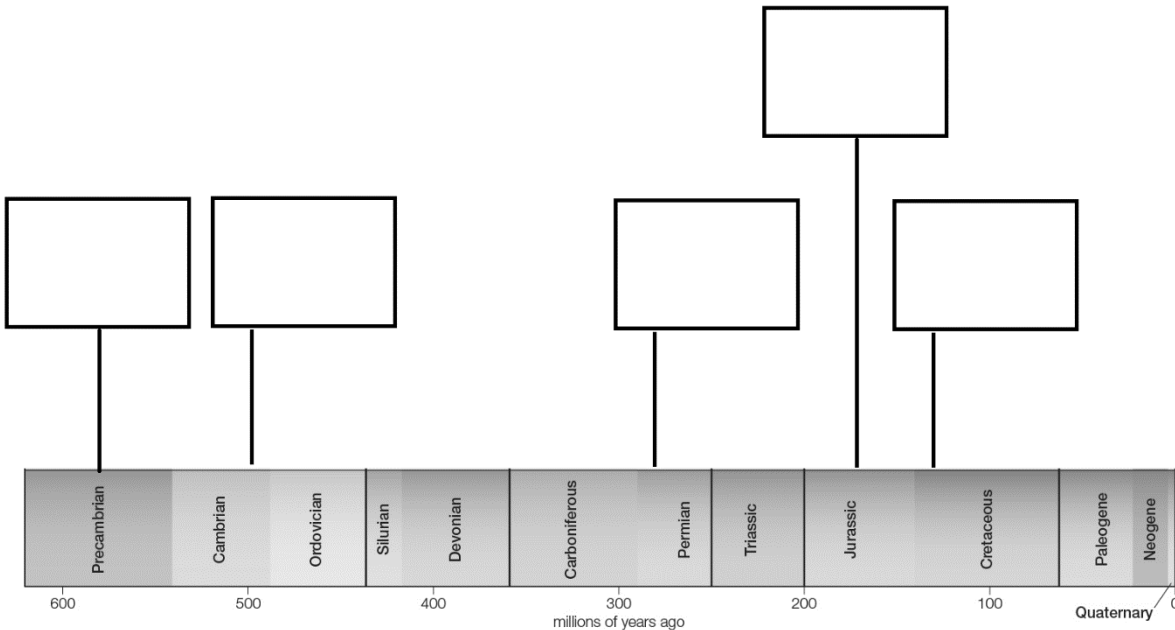
- a.** Give two reasons why the fossilisation of shark specimens is a very rare event. 2 marks

Tiger sharks have uniquely shaped teeth with a broad serrated cutting edge that makes their teeth so sharp that they can easily cut through sea turtle shells. The earliest tiger shark teeth appear in the fossil record about 56 million years ago.

- b.** Would carbon dating or potassium-argon dating be the most accurate dating method for these teeth? Justify your response. 2 marks

- c. Place the following groups of life forms in the boxes on the timeline of Earth's geological history. 2 marks

Sharks, first vertebrates, first flowering plants, mammals, first multicellular organisms



Source: <https://media1.britannica.com>

- d. Sharks have a similar streamlined body shape to other organisms that they share the ocean habitat with, such as dolphins and penguins. Is this similarity an example of convergent or divergent evolution? Explain your answer. 2 marks

Question 8 (4 marks)

Over 50 million years ago, the evolutionary change began in birds that led to penguins – a group of birds that are suited to diving and catching fish to feed on. They have evolved flipper like wings and specialised feathers. They have also developed the ability to optimise their use of oxygen in their breath to sustain the longest possible dive time, due to the presence of a high amount of haemoglobin in their blood. Haemoglobin is responsible for transporting oxygen to cells via the blood stream.

Scientists have been comparing two different haemoglobin molecules for their role in the diving ability of penguins: one molecule that originated in penguins' early ancestor, about 20 million years ago; the other, originated in non-diving seabirds, such as albatrosses, about 60 million years ago. It was found that the haemoglobin molecule in the ancestral species of the penguin captured oxygen more readily than that of the non-diving seabirds.

- a.** What is the term used to describe the work that scientists are doing with the two haemoglobin molecules? 1 mark

- b.** Explain how natural selection has influenced the oxygen carrying ability of the haemoglobin molecules in penguins over time? 3 marks

Question 9 (5 marks)

Species A	Species X	Species Y	Species Z
—	—	— —	—
—	— —	—	—
—			— —
— —	— —	— —	—

The electrophoretic gel in the diagram above shows the results of a comparison of DNA of a *Homo sapiens* (Species A) with that of a species of a hominin, hominoid and a primate.

- a. Explain how the results of the gel could be used to determine which species – X, Y and Z represents a primate, hominoid and hominin.

3 marks

- b. Identify two characteristics of Species A's skull that would provide evidence that the species was in fact a *Homo sapiens*, rather than *Homo habilis*?

2 marks

Question 10 (3 marks)

Otzi, also known as The Iceman, is a naturally mummified specimen that was discovered in Europe in 1991. Otzi's remains have been determined to be 5,500 years old. Otzi was found to be tattooed, and was discovered with tools including a dagger and an axe as well as a bone needle that is thought to be part of an ancient medical kit.

The axe was made from a copper compound and is produced by scraping and flaking rock containing copper from the side of a mountain, heating it in a crucible and obtaining almost pure copper, which could be poured into a mould. This complex process is evidence of sophisticated technology in the population to which Otzi belonged.

A dagger, as well as arrows and a bow and an arrow repair kit indicated that Otzi was a hunter, hunting ibex and mountain goats as a source of meat. Also, there was evidence that other parts of the animals, such as antlers, were used in tool making.

Otzi was found to be carrying a backpack and was wearing shoes and layers of clothing including a woven grass cape, thought to act as a waterproof layer, and leggings and undergarments made from animal skin. The shoes were made of animal skin and stuffed with hay for insulation.

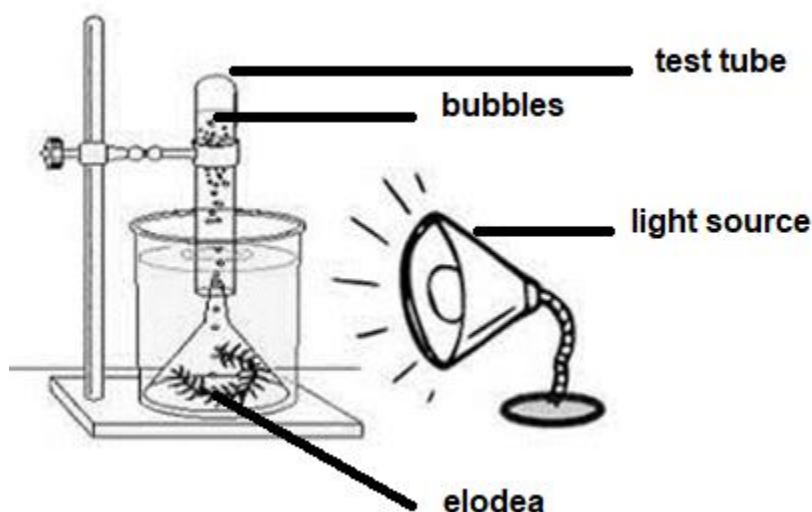
The tattoos were blue-black in colour and showed sets of parallel lines which were positioned on his lower back, legs and feet. It is thought that the tattoos were produced by injecting ash under the skin, with a bone or wooden needle.

Identify three examples of cultural evolution observed with the discovery of Otzi and explain how each relates to biological evolution. 3 marks

Cultural evolution	Relationship to biological evolution

Question 11 (11 marks)

The following experiment to measure photosynthesis was set up using a pondwater plant called elodea (*Elodea canadensis*). They were placed in different solutions of water containing different concentrations of carbon dioxide diffused into the water. All were covered in water and had the same light source shown in the diagram below. The number of bubbles were recorded over a 3-minute period.



Source: <https://www.biologycorner.com/>

The results of the experiment were as follows:

Solutions	Number of bubbles observed over 3 minutes.		
	Trial 1	Trial 2	Trial 3
Solution 1 300ml water 1g sodium bicarbonate 10cm elodea	106	95	125
Solution 2 300ml water 0.5g sodium bicarbonate 10cm elodea	36	37	45
Solution 3 300ml water 0g sodium bicarbonate 10cm elodea	6	3	9
Solution 4 300ml water 1g sodium bicarbonate	0	0	0

a. Analyse the results of the experiment.

4 marks

b. What output of photosynthesis produced the bubbles observed in the experiment? 1 mark

c. Give an example of how these experimental results could be recorded in a qualitative method? Include the definition of ‘qualitative’ in your response. 2 marks

d. Explain a random error that may have occurred in the experiment and how it could affect the precision of the results. 2 marks

- e. List two items that should be used when conducting this experiment to increase safety.

2 marks

MULTIPLE CHOICE ANSWER SHEET **Name:.....****Instructions: Shade the letter corresponding to the correct response for each question.**

Question				
1	A	B	C	D
2	A	B	C	D
3	A	B	C	D
4	A	B	C	D
5	A	B	C	D
6	A	B	C	D
7	A	B	C	D
8	A	B	C	D
9	A	B	C	D
10	A	B	C	D
11	A	B	C	D
12	A	B	C	D
13	A	B	C	D
14	A	B	C	D
15	A	B	C	D
16	A	B	C	D
17	A	B	C	D
18	A	B	C	D

Question				
19	A	B	C	D
20	A	B	C	D
21	A	B	C	D
22	A	B	C	D
23	A	B	C	D
24	A	B	C	D
25	A	B	C	D
26	A	B	C	D
27	A	B	C	D
28	A	B	C	D
29	A	B	C	D
30	A	B	C	D
31	A	B	C	D
32	A	B	C	D
33	A	B	C	D
34	A	B	C	D
35	A	B	C	D
36	A	B	C	D
37	A	B	C	D
38	A	B	C	D
39	A	B	C	D
40	A	B	C	D