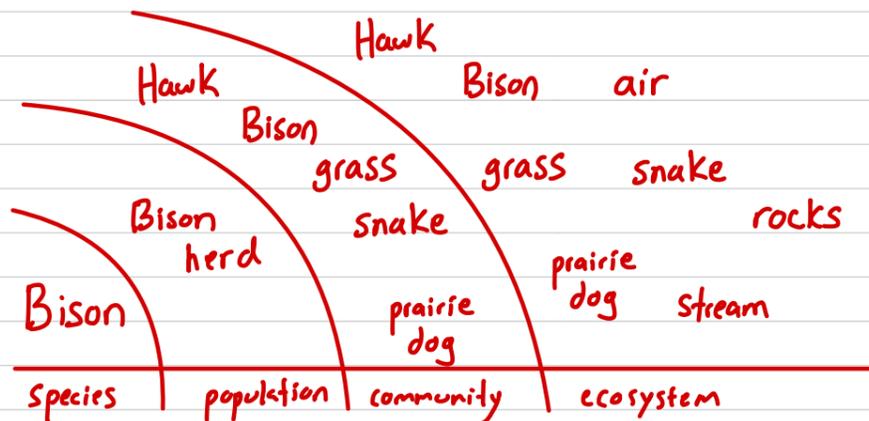
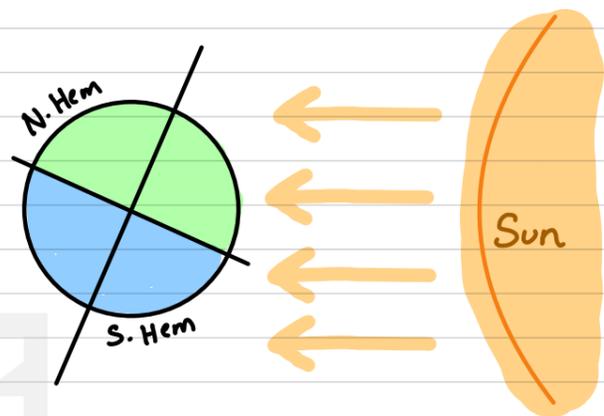


Markscheme

① Many possible answers. Sample structure below:



② Canada is in the Northern Hemisphere while Australia is in the Southern Hemisphere. When it is summer in Canada, the N. Hemisphere is tilted toward the Sun but the S. Hemisphere is tilted away \therefore making it winter



③ The tilt causes a hemisphere to tilt towards and away from the Sun. Without this tilt the hemispheres would have consistent insolation year-round and no seasons.

④ Low pressure zones are a result of large amounts of air rising up in an area - as air is continually rising it makes the area have a relative low pressure compared to the top. As these areas carry large amounts of water into the air this will result in this moist air condensing and falling as precipitation, i.e. storms.

⑤ Tropical rainforests found \sim equator in the tropics ($0-20^\circ$) because this area of the globe receives the highest insolation more insolation means the air at the surface is warmed, expands and rises. As the water in air condenses it rains.

Deserts are found $\sim 30^\circ-50^\circ$ as the cool dry air from the tropics is pushed away and as it does so it cools and falls at $\sim 30^\circ$ latitude. As the dry air descends it warms and this is able to hold a lot of water, drawing up the little moisture available.

Temperate forests are around $20-50^\circ$ latitude with Taiga at $\sim 60^\circ$. The dry warm air from deserts pick up moisture and as they encounter cold air from poles, they are driven up. As the moist air cools it condenses and falls as precipitation (type dependent on season)

Tundra found in very high latitudes $>60^\circ$ as these areas receive little insolation and little rain. Because of the very cold temperatures rain is scarce and the air that falls is dry from the previous cell (in temperate regions). Any precipitation that falls is mainly snow which accumulates and reflects sunlight, further reducing temperatures

⑥ As gravity pulls down on the air particles in the atmosphere, the higher the altitude, the less dense or 'thinner' the air. Everest has very high altitudes and above a certain level the amount of O_2 available is insufficient to sustain human life - Death Zone \therefore External O_2 tanks are required to survive

⑦ a) many possible answers

	local example	international example
Species		
population		
community		
habitat		
ecosystem		
biome		

⑦ b) Biome named example latitude producer herbivore carnivore

Tropical rainforest

Coral reef

Lake

Tropical savanna

Desert

Temperate grassland

Temperate deciduous forest

Arctic Tundra

Boreal Forest

⑧ Tropical rainforests have the most intense and consistent insolation. This not only allows for ↑↑ photosynthesis yearround but very high amounts of precipitation. This allows for a yearlong growing period and for producers to be very successful ∴ ↑↑ productivity

Deserts have very low precipitation and ↑ day temperatures. As a result this limits photosynthesis, reducing opportunity for plant growth and ↓ producer productivity

Tundras have low precipitation and very cold temperatures due to the limited and variable insolation. As a result, photosynthesis limited.

⑨

	<u>Animal</u>
Domain	Eukaryota
Kingdom	Animalia
Phylum	Chordata
Class	Mammalia
Order	Primates
Family	Hominidae
Genus	Homo
Species	Homo sapiens



	<u>Plant</u>
Domain	Eukaryota
Kingdom	Plantae
Phylum	Magnoliophyta
Class	Liliopsida
Order	Asparagales
Family	Orchidaceae
Genus	Dracula
Species	Dracula vampira



⑩

① Does not have spots on its fur... 2
Has spots on its fur 4

④ Spots are not grouped... Acinonyx jubatus
Spots are grouped 5

② Has stripes on its fur Panthera tigris
Does not have stripes 3

⑤ Grouped spots form a ring with spot in center
..... Panthera onca

③ The tip of tail has black tuft of hair Panthera leo
The tip of tail does not have black tuft of hair ... Puma concolor

Grouped spots do not form a ring with center spot
..... Panthera pardus