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| **Topic heading** | **Syllabus Ref** | **Idea cluster** | **Question 1** | **Question 2** | **Question 3** | **Question 4** |
| **Ecology** | **BEc1a** | **Adaptations, interdependence**  | **An abiotic factor is:**1. **A non-living organic molecule affecting and ecosystem.**
2. **A non-living factor affecting ecosystems such as sunlight**
3. **A living factor that affects ecosystems such as the number of prey available.**
4. **A living molecule affecting an ecosystem**
 | **A biotic factors is:**1. **A non-living organic molecule affecting and ecosystem.**
2. **A non-living factor affecting ecosystems such as sunlight**
3. **A living factor that affects ecosystems such as the number of prey available**
4. **A living molecule affecting an ecosystem**
 | **An ecosystem is:**1. **The interaction between all the living and non-living things in an environment.**
2. **Refers only to the living things in a specific area.**
3. **Refers only to the non-living things in a specific area.**
4. **Where an animal lives.**
 | **Factors plants compete for include:**1. **Space and light.**
2. **Space, light and water.**
3. **Space, light, water and mineral ions.**
4. **Space, light, water, mineral ions and chloroplasts.**
 |
| **Answers** |  |  | **B** | **C** | **A** | **C.** |
| **Ecology** | **BEc2a** | **Levels of organisation** | **What is the primary source of energy for all ecosystems?**1. **Plants**
2. **The sun**
3. **Chemicals**
4. **Water**
 | **All food chains must start off with:**1. **A primary consumer**
2. **A secondary consumer**
3. **Microorganisms**
4. **A plant (or photosynthetic organism.**
 | **What is this piece of equipment called?**Image result for Quadrat1. **A quadrat**
2. **A line transect**
3. **A random sampler**
4. **A rectangle**
 | **Random sampling is used:**1. **To identify the number of species.**
2. **To avoid bias when looking at data.**
3. **To estimate the number of species in an area.**
4. **To identify the distribution of species between two points of interest, such as between a foot path and some woods.**
 |
| **Answers** |  |  | **B** | **D** | **A** | **C** |

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| **Topic heading** | **Syllabus Ref** | **Idea cluster** | **Question 5** | **Question 6** | **Question 7;** | **Question 8** |
| **Ecology** | **BEc1b** | **Adaptations, interdependence**  | **Animals compete for:**1. **Food only**
2. **Food and mates.**
3. **Food, mates and territory.**
4. **Food, mates, territory and oxygen**
 | **If the number of rabbits decreased from this ecosystem then the number of mice would likely:**Image result for food chain1. **Stay the same.**
2. **Increase.**
3. **Decrease.**
4. **Be made extinct.**
 | **The ways living organisms interact is called:**1. **Denaturing**
2. **Competition**
3. **Predator-Prey relationships**
4. **Interdependence**
 | **Adaptations may be:**1. **Structural**
2. **Behavioural**
3. **Structural or behavioural**
4. **Structural, behavioural or functional.**
 |
| **Ecology** |
| **Answers** |  |  | **C** | **B** | **D** | **D** |
| **Ecology** | **EC2b** | **Levels of organisation** | **A line transect is used:**1. **To identify the number of species.**
2. **To avoid bias when looking at data.**
3. **To estimate the number of species in an area.**
4. **To identify the distribution of species between two points of interest, such as between a foot path and some woods**
 | **The mean of these numbers: 3, 3, 5, 6 would be:**1. **4.25**
2. **4.67**
3. **3**
4. **4**
 | **The mode of these numbers: 3, 3, 5, 6 would be:**1. **4.25**
2. **4.67**
3. **3**
4. **4**
 | **The median of these numbers: 3, 3, 5, 6 would be:**1. **4.25**
2. **4.67**
3. **3**
4. **4**
 |
| **Answers** |  |  | **D** | **A** | **C** | **D** |

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| **Topic heading** | **Syllabus Ref** | **Idea cluster** | **Question 9** | **Question 10** |  |  |
| **Ecology** | **BEc1c** | **Adaptations, interdependence**  | **Organisms that survive in extreme conditions are called:**1. **Hardophiles**
2. **Extremophiles**
3. **Non-living**
4. **Thermochromatic**
 | **An example of an extreme environment would be:**1. **The sun**
2. **Deep sea vents**
3. **Sewer systems**
4. **The human stomach**
 |  |  |
| **Answers** |  |  | **B** | **B** |  |  |
| **Ecology** | **EC2b** | **Levels of organisation** | **What is the name given to this type of relationship:**Image result for predator prey graph1. **Producer-consumer**
2. **Consumer –prey**
3. **Predator-prey**
4. **Rabbit-fox**
 | **Which town is situated on an unpolluted river?****A A****B B****C C****D D** |
|  |  |  | **C** | **D** |
| **Ecology** | **EC2c** | **How materials are cycled** | **Below is a diagram of the carbon cycle:** | **Which process releases water vapour to the atmosphere?****A Transpiration****B Condensation****C Precipitation****D Absorption** | **Which process removes water vapour from the atmosphere?****A Evaporation****B Condensation****C Nitrogen fixation****D Neutralisation** |
|  |  |  | **D** | **A** | **B** |
| **Ecology** | **Ec2c** | **Land Use and Global Warming** | **Large-scale deforestation in tropical areas has occurred to:****A Provide land for sunbathing and tourism****B Provide land for house building****C Provide land for cattle and rice fields****D Provide wood for burning in wood-fired stoves** | **Two greenhouse gases that contribute to global warming are:****A O2 and CO2****B SO2 and O2****C CO and NO2****D CO2 and CH4** | **What processes mean scientists have come to a consensus that global warming is real?****A Replicated experiments in the laboratory****B Presentation and graph seen of rising temperature at scientific conferences****C Systematic review of thousands of peer reviewed publications****D Sea levels have risen and the climate has changed**  | **Which one of the following is not a way of reducing negative human effects on ecosystems and maintaining biodiversity?****A recycling resources (rather than landfill)****B removal of hedgerows on farming land****C breeding programmes for endangered species****D reduction of deforestation** |
|  |  |  | **C** | **D** | **C** | **B** |