

1. The table below shows two different types of interactions, X and Y.  
Jadual di bawah menunjukkan dua jenis interaksi, X dan Y.

| Interaction<br>Interaksi | Example<br>Contoh                                                                      |
|--------------------------|----------------------------------------------------------------------------------------|
| X                        | Rhizobium bacteria and legume plant<br><i>Bakteria Rhizobium dan tumbuhan kekacang</i> |
| Y                        | Money plant and mango tree<br><i>Pokok duit-duit dan pokok mangga</i>                  |

According to the information above, what do X and Y represent?  
Berdasarkan maklumat di atas, apakah yang diwakili oleh X dan Y?

- ☐ A
- | X                              | Y                                    |
|--------------------------------|--------------------------------------|
| Mutualism<br><i>Mutualisme</i> | Commensalism<br><i>Kommensalisme</i> |
- ☐ B
- | X                                | Y                              |
|----------------------------------|--------------------------------|
| Parasitism<br><i>Parasitisme</i> | Mutualism<br><i>Mutualisme</i> |
- ☐ C
- | X                                    | Y                                |
|--------------------------------------|----------------------------------|
| Commensalism<br><i>Kommensalisme</i> | Parasitism<br><i>Parasitisme</i> |
- ☐ D
- | X                              | Y                                |
|--------------------------------|----------------------------------|
| Mutualism<br><i>Mutualisme</i> | Parasitism<br><i>Parasitisme</i> |

2. Which of the following about animal Q (sea anemone) and animal X (clown fish) is true?  
Antara yang berikut, yang manakah benar tentang haiwan Q (buran laut) dan haiwan X (ikan badut)?

- ☐ A
- | Q (sea anemone)<br>Q (buran laut)                                             | X (clownfish)<br>X (ikan badut)                                               |
|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Protected from its enemies by X<br><i>Dilindungi daripada musuhnya oleh X</i> | Protected from its enemies by Q<br><i>Dilindungi daripada musuhnya oleh Q</i> |
- ☐ B
- | Q (sea anemone)<br>Q (buran laut)                                                                             | X (clownfish)<br>X (ikan badut)                                                                               |
|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Obtains nutrients in the form of waste from X<br><i>Mendapat nutrien dalam bentuk sisa makanan daripada X</i> | Obtains nutrients in the form of waste from Q<br><i>Mendapat nutrien dalam bentuk sisa makanan daripada Q</i> |
- ☐ C
- | Q (sea anemone)<br>Q (buran laut)                                                                             | X (clownfish)<br>X (ikan badut)                                               |
|---------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| Obtains nutrients in the form of waste from X<br><i>Mendapat nutrien dalam bentuk sisa makanan daripada X</i> | Protected from its enemies by Q<br><i>Dilindungi daripada musuhnya oleh Q</i> |
- ☐ D
- | Q (sea anemone)<br>Q (buran laut)                                             | X (clownfish)<br>X (ikan badut)                                                                               |
|-------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Protected from its enemies by X<br><i>Dilindungi daripada musuhnya oleh X</i> | Obtains nutrients in the form of waste from Q<br><i>Mendapat nutrien dalam bentuk sisa makanan daripada Q</i> |

3. Animal X is an animal that eats only producers. What is the class of animal X?  
Haiwan X merupakan haiwan yang memakan pengeluar sahaja. Apakah kelas haiwan X?

- ☐ A Producer  
*Pengeluar*
- ☐ B Primary consumer  
*Pengguna primer*
- ☐ C Secondary consumer  
*Pengguna sekunder*
- ☐ D Decomposer

4. Which of the following is the characteristics of predator and prey?  
Antara yang berikut, yang manakah adalah ciri-ciri pemangsa dan mangsa?



- ☐ A
- | Predator<br>Pemangsa                                          | Prey<br>Mangsa                                          |
|---------------------------------------------------------------|---------------------------------------------------------|
| Has stereoscopic vision<br>Mempunyai penglihatan stereoskopik | Has monocular vision<br>Mempunyai penglihatan monokular |
- ☐ B
- | Predator<br>Pemangsa                                     | Prey<br>Mangsa                                                 |
|----------------------------------------------------------|----------------------------------------------------------------|
| Has monocular hearing<br>Mempunyai pendengaran monokular | Has stereoscopic hearing<br>Mempunyai pendengaran stereoskopik |
- ☐ C
- | Predator<br>Pemangsa                   | Prey<br>Mangsa                                     |
|----------------------------------------|----------------------------------------------------|
| Possesses sharp teeth<br>Bergigi tajam | Possesses strong beak<br>Mempunyai paruh yang kuat |
- ☐ D
- | Predator<br>Pemangsa           | Prey<br>Mangsa                              |
|--------------------------------|---------------------------------------------|
| Presence of wings<br>Ada kepak | Presence of four limbs<br>Ada empat anggota |

5. Suggest one effect if the oxygen cycle is disrupted.  
Cadangkan satu kesan jika kitar oksigen terganggu.

- ☐ A Increase in oxygen content in the atmosphere  
Peningkatan kandungan oksigen dalam atmosfera
- ☐ B Decrease in carbon dioxide absorption by plants  
Penurunan penyerapan karbon dioksida oleh tumbuhan
- ☐ C Increase in rainfall in the ecosystem  
Peningkatan hujan dalam ekosistem
- ☐ D Faster growth of plants  
Pertumbuhan tumbuhan lebih cepat

6. The diagram below shows a food chain present in a balanced ecosystem. Which of the organism in the food chain can be classified as primary consumers?  
Rajah di bawah menunjukkan satu rantai makanan yang terdapat dalam ekosistem yang seimbang. Antara organisma dalam rantai makanan itu, yang manakah boleh dikelaskan sebagai pengguna pertama?

Paddy → Rats → Snake → Eagle  
Padi → Tikus → Ular → Helang

- ☐ A Rats  
Tikus
- ☐ B Paddy  
Padi
- ☐ C Snake  
Ular
- ☐ D Eagle  
Helang

7. What type of interaction exists between plants of same species and sunlight?  
Apakah jenis interaksi yang wujud antara tumbuhan yang sama spesies dan cahaya matahari?

- ☐ A Mutualism  
Mutualisme
- ☐ B Predator-prey  
Mangsa-pemangsa
- ☐ C Intraspecific competition  
Persaingan intraspesifik
- ☐ D Interspecific competition  
Persaingan interspesifik

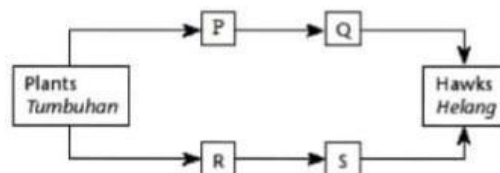
8. Which statement describes a balanced ecosystem?  
Pernyataan manakah menerangkan ekosistem seimbang?

- ☐ A The number of organisms keeps increasing  
*Bilangan organisma sentiasa meningkat*
- ☐ B The interaction between living and non-living components is stable  
*Interaksi antara komponen hidup dan bukan hidup adalah stabil*
- ☐ C There is no competition for food or space  
*Tiada persaingan untuk makanan atau ruang*
- ☐ D All organisms depend only on non-living components  
*Semua organisma hanya bergantung kepada komponen bukan hidup*

9. What will happen if there is continuous deforestation in an area?  
Apakah yang akan berlaku jika penebangan hutan berlaku secara berterusan di sesuatu kawasan?

- ☐ A Oxygen content in air increases  
*Kandungan oksigen dalam udara meningkat*
- ☐ B The balance of carbon dioxide and oxygen will be disturbed  
*Keseimbangan karbon dioksida dan oksigen akan terganggu*
- ☐ C The amount of rainfall will increase  
*Jumlah hujan akan meningkat*
- ☐ D Nutrient recycling becomes faster  
*Kitar semula nutrien menjadi lebih cepat*

10. The diagram below shows a food web.  
Rajah di bawah menunjukkan satu siratan makanan.



What represents P, Q, R and S?  
Apakah yang diwakili oleh P, Q, R dan S?

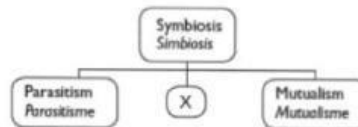
- ☐ A
- | P                           | Q                    | R                              | S                    |
|-----------------------------|----------------------|--------------------------------|----------------------|
| Myna<br><i>Burung tiung</i> | Snake<br><i>Ular</i> | Grasshopper<br><i>Belalang</i> | Frog<br><i>Katak</i> |
- ☐ B
- | P                    | Q                           | R                              | S                    |
|----------------------|-----------------------------|--------------------------------|----------------------|
| Frog<br><i>Katak</i> | Myna<br><i>Burung tiung</i> | Grasshopper<br><i>Belalang</i> | Snake<br><i>Ular</i> |
- ☐ C
- | P                           | Q                    | R                    | S                              |
|-----------------------------|----------------------|----------------------|--------------------------------|
| Myna<br><i>Burung tiung</i> | Snake<br><i>Ular</i> | Frog<br><i>Katak</i> | Grasshopper<br><i>Belalang</i> |
- ☐ D
- | P                              | Q                           | R                    | S                    |
|--------------------------------|-----------------------------|----------------------|----------------------|
| Grasshopper<br><i>Belalang</i> | Myna<br><i>Burung tiung</i> | Snake<br><i>Ular</i> | Frog<br><i>Katak</i> |

11. A bird feeds on plants and insects. What is this bird called?  
*Seekor burung makan tumbuhan dan serangga. Apakah burung ini?*

- I Producer  
*Pengeluar*
- II Primary consumer  
*Pengguna primer*
- III Tertiary consumer  
*Pengguna tertier*
- IV Secondary consumer  
*Pengguna sekunder*

- ☐ A I and II  
*I dan II*
- ☐ B I and III  
*I dan III*
- ☐ C II and IV  
*II dan IV*
- ☐ D III and IV  
*III dan IV*

12. The diagram below shows the interactions between living organisms.  
*Rajah di bawah menunjukkan interaksi antara organisma hidup.*



Which of the following pair is represented by interaction X?  
*Antara pasangan yang berikut, yang manakah diwakili oleh interaksi X?*

- ☐ A Crab and barnacle  
*Ketam dan teritip*
- ☐ B Grass and weed  
*Rumput dan rumpai*
- ☐ C Algae and fungi  
*Alga dan kulat*
- ☐ D Dog ticks and dog  
*Kutu anjing dan anjing*

13. Which of the following eats producers?  
*Antara yang berikut, yang manakah memakan pengeluar?*

- ☐ A Primary consumer  
*Pengguna primer*
- ☐ B Secondary consumer  
*Pengguna sekunder*
- ☐ C Tertiary consumer  
*Pengguna tertier*
- ☐ D Decomposers  
*Pengurai*

14. Which of the following processes involve the use of carbon in the form of carbon compounds or carbon dioxide in the carbon cycle?  
*Antara proses berikut, yang manakah melibatkan penggunaan karbon dalam bentuk sebatian karbon atau karbon dioksida dalam kitar karbon?*

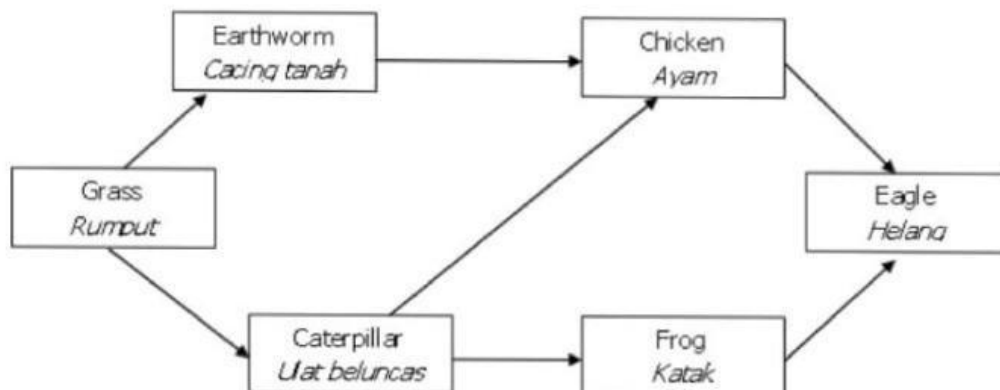
- ☐ A Respiration  
*Respirasi*
- ☐ B Decay  
*Pereputan*
- ☐ C Combustion  
*Pembakaran*
- ☐ D Feeding  
*Pemakanan*

15. Which of the following approaches can be used to overcome deforestation?  
Antara pendekatan berikut, yang manakah boleh digunakan untuk mengatasi masalah hutan?

- I Reforestation  
Penghutan semula
- II Sustainable management  
Pengurusan sokongan
- III Illegal logging  
Pembalakan haram
- IV Illegal hunting  
Pemburuan haram

- ☐ A I and II  
I dan II
- ☐ B I and III  
I dan III
- ☐ C II and IV  
II dan IV
- ☐ D III and IV  
III dan IV

16. How many food chains are there in the food web in the diagram below?  
Berapa banyakkah rantai makanan yang terdapat dalam siratan makanan dalam rajah di bawah?

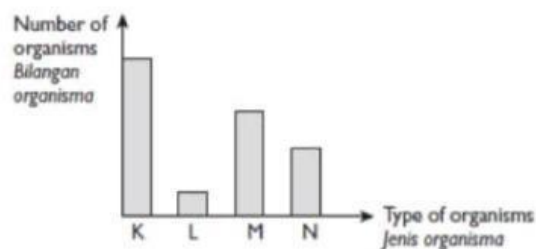


- ☐ A 2
- ☐ B 3
- ☐ C 4
- ☐ D 5

17. Which of the following populations of organisms live in a habitat of damp soil?  
Antara populasi organisma berikut, yang manakah hidup di habitat tanah lembap?

- ☐ A Leech, millipede, earthworm  
Lintah, ulat gonggok, cacing tanah
- ☐ B Wood lice, dog tick, lizard  
Kutu kayu, kutu anjing, cicak
- ☐ C Aphid, termite, caterpillar  
Afid, anai-anai, beluncas
- ☐ D Scorpion, grasshopper, dragonfly larva  
Kala jengking, belalang, larva pepatung

18. The diagram below shows the number of organisms K, L, M and N in a habitat.  
Rajah di bawah menunjukkan bilangan organisma K, L, M, dan N di suatu habitat.



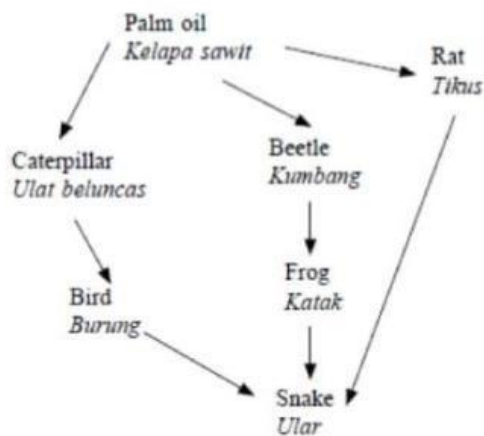
Which of the following pyramids of numbers correctly represents the population of these organisms?  
Antara piramid nombor berikut, yang manakah betul mewakili populasi organisma ini?

- ☐ A
- 
- ☐ B
- 
- ☐ C
- 
- ☐ D
- 

19. Which of the following is caused by excess carbon dioxide in the atmosphere?  
Antara yang berikut, manakah yang disebabkan oleh karbon dioksida yang berlebihan di atmosfera?

- ☐ A The greenhouse effect  
Kesan rumah hijau
- ☐ B The thinning of the ozone layer  
Penipisan lapisan ozon
- ☐ C Acid rain  
Hujan asid
- ☐ D Water pollution  
Pencemaran air

20. The diagram below shows a food web in an oil palm plantation.  
Rajah di bawah menunjukkan suatu siratan makanan di sebuah ladang kelapa sawit.



Which of the following animals are primary consumers?  
Antara haiwan berikut, yang manakah pengguna primer?

- ☐ A Snakes  
Ular
- ☐ B Birds and frogs  
Burung dan katak
- ☐ C Caterpillars, birds and beetles  
Ulat beluncas, burung dan kumbang
- ☐ D Caterpillars, beetles and rats  
Ulat beluncas, kumbang dan tikus