ENGLAND GCSE COMBINED SCIENCE EDEXCEL HIGHER · UNIT 9 · 25 QUESTIONS

Ecosystems and Material Cycles — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button so it can be fixed.

1 **Seabirds on a rocky island eat fish. If the fish population falls, what happens to the seabirds?**

A their numbers fall

B they move to the sea

C they eat more fish

D their numbers rise

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2 **Fishing boats use diesel. What is diesel made from?**

A wood, cut from trees

B coal, mined from the ground

C crude oil

D water, from the sea

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3 **A river flows to the sea. What is this part of?**

A the nitrogen cycle

B the water cycle

C the rock cycle

D the carbon cycle

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4 **A forest absorbs carbon dioxide. Which process does this?**

- A respiration in the trees
- B combustion of the wood
- C decomposition in the soil
- D photosynthesis

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5 **A honeybee collects nectar. What is nectar?**

- A a sugary liquid
- B a protein-rich food
- C a mineral solution
- D a fatty substance

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6 **Rabbits with white fur survive better in snow. What is this an example of?**

A natural selection

B artificial selection

C mutation

D extinction

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7 **In a food chain, where does the energy come from?**

A the consumers

B the soil

C the decomposers

D the Sun

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8 **Producers in a food chain hold 100000 kJ of energy. About 10 percent passes to the primary consumers. How much energy reaches them?**

- A 10000 kJ
- B 100000 kJ
- C 5000 kJ
- D 20000 kJ

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9 **A quadrat of area 20 square metres contains on average 4 daisies. Estimate the number of daisies in a field of 200 square metres.**

- A 40
- B 400
- C 80
- D 20

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10 **What is a biotic factor?**

A a chemical factor, like pH

B a non-living factor, like temperature

C a physical factor, like light

D a living factor, like a predator

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11 **Why repeat a quadrat sample and take a mean?**

A for a reliable result

B to practise using the quadrat

C to use up the time available

D to find more species

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12 **Why are quadrats placed randomly?**

A to find the most organisms

B to save time

C to get a fair sample

D to avoid counting

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13 **A field has 2000 kg of grass. If 10 percent of the energy passes to the rabbits, how much grass biomass supports the rabbits?**

A 2000 kg

B 400 kg

C 100 kg

D 200 kg

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14 **What is a genetically modified crop?**

A a crop grown without any fertiliser

B a crop grown in a greenhouse

C a crop that needs no water

D a crop with a useful new gene

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15 **How does combustion affect carbon dioxide in the air?**

A it removes carbon dioxide

B it releases carbon dioxide

C it turns carbon dioxide into oxygen

D it stores carbon dioxide in rock

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16 **Why is decay important in an ecosystem?**

A it stops plants growing

B it makes the soil warmer

C it removes carbon dioxide

D it recycles nutrients

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17 **Producers in a food chain have a biomass of 1000 kg. About 10 per cent of biomass passes to each level. What is the biomass of the secondary consumers?**

A 20

B 10

C 100

D 1

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18 **What is the water cycle driven by?**

A wind only

B energy from the soil

C gravity only

D energy from the Sun

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19 **A quadrat of area 20 square metres contains on average 6 daisies. Estimate the number of daisies in a field of 200 square metres.**

A 30

B 600

C 120

D 60

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20 **A field has 1000 kg of grass. If 5 percent of the energy passes to the rabbits, how much grass biomass supports the rabbits?**

- A 100 kg
- B 50 kg
- C 500 kg
- D 25 kg

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21 **What threatens food security?**

- A a growing population
- B better farming methods
- C fewer people in the world
- D more food in shops

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22 **What is evaporation in the water cycle?**

- A water freezing on mountains
- B rain falling on the sea
- C water running off the land into rivers
- D water evaporating from seas

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23 **What shape is a pyramid of biomass?**

- A narrow at the bottom, wide at the top
- B the same width all the way up
- C a circle
- D wide at the bottom, narrow at the top

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24 **What makes a good compost heap?**

- A cold, dry and sealed
- B wet, cold and airless
- C dry, warm and sealed
- D warm, moist and airy

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25 **Producers in a food chain have a biomass of 2000 kg. About 10 per cent of biomass passes to each level. What is the biomass of the secondary consumers?**

- A 40
- B 20
- C 200
- D 2

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ANSWER KEY

1. A
2. C
3. B
4. D
5. A
6. A
7. D
8. A
9. A
10. D
11. A
12. C
13. D
14. D
15. B
16. D
17. B
18. D
19. D
20. B
21. A
22. D
23. D
24. D
25. B

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