ENGLAND GCSE BIOLOGY AQA HIGHER · UNIT 4 · 25 QUESTIONS

Bioenergetics — 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 **A forest absorbs carbon dioxide from the air. Which process is responsible?**

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

Understand It with Pulse | Flag a mistake

2 **A sandwich provides energy. Which process releases energy from food in cells?**

- A fermentation
- B photosynthesis
- C digestion
- D respiration

Understand It with Pulse | Flag a mistake

3 **A sunflower is left in bright light. Its leaves photosynthesise faster than in dim light. What else would increase the rate?**

- A less water in the soil
- B less chlorophyll in the leaves of the plant
- C a lower temperature
- D more carbon dioxide in the air

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4 **A cheese pizza contains cheese made from milk. What is milk rich in?**

- A vitamin C
- B calcium
- C iron
- D fibre

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5 **A school lunch tray holds a meal. Why do we need food?**

- A to feel full after eating
- B for fun only, not for health
- C to stay awake at night
- D for energy and growth

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6 **Red apples provide energy. Which nutrient in apples provides most energy?**

- A fibre, for digestion
- B carbohydrates
- C protein, for growth
- D fat, for insulation

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7 **One glucose molecule releases 30 molecules of ATP in respiration. How many ATP molecules are released from 10 glucose molecules?**

- A 600
- B 300
- C 270
- D 330

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8 **How can a grower increase crop yield in a greenhouse?**

- A by keeping the greenhouse dark
- B by watering less often
- C by cooling the greenhouse down
- D by adding carbon dioxide

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9 **A food contains 200 kJ of energy per 100 g. How much energy is in 300 g of the food?**

- A 550 kJ
- B 600 kJ
- C 650 kJ
- D 1200 kJ

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10 **Photosynthesis produces oxygen at a rate of 2 cm cubed per minute. How much oxygen is produced in 20 minutes?**

- A 40 cm^3
- B 80 cm^3
- C 30 cm^3
- D 50 cm^3

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11 **A pondweed plant releases 24 bubbles of oxygen in 3 minutes. How many bubbles does it release per minute?**

- A 7
- B 16
- C 9
- D 8

Understand It with Pulse | Flag a mistake

12 **What is the word equation for photosynthesis?**

- A carbon dioxide plus water gives glucose plus oxygen
- B glucose plus oxygen gives carbon dioxide plus water
- C glucose plus water gives carbon dioxide plus oxygen
- D carbon dioxide plus oxygen gives glucose plus water

Understand It with Pulse | Flag a mistake

13 **What happens to heart rate during exercise?**

A it decreases

B it stays the same

C it increases

D it stops

Understand It with Pulse | Flag a mistake

14 **What happens to excess amino acids in the body?**

A they become urea

B they are breathed out

C they are turned into glucose

D they are stored as glycogen

Understand It with Pulse | Flag a mistake

15 **What does a plant make from glucose for energy storage in seeds?**

A cellulose

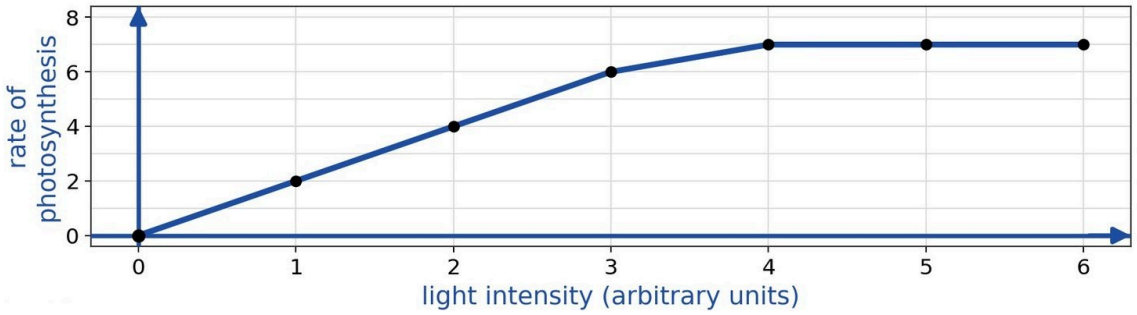
B starch

C protein

D lipids

Understand It with Pulse | Flag a mistake

16 **The graph shows the rate of photosynthesis at different light intensities. At which light intensity does the rate first reach its maximum?**



A 2

B 3

C 4

D 6

Understand It with Pulse | Flag a mistake

17 **Why do muscles ache after hard exercise?**

A the muscles run out of water

B oxygen builds up in the muscles

C lactic acid builds up

D glucose runs out completely

Understand It with Pulse | Flag a mistake

18 **A person breathes 15 times per minute. How many breaths is that in one hour?**

A 900

B 1800

C 960

D 840

Understand It with Pulse | Flag a mistake

19 **A food contains 100 kJ of energy per 100 g. How much energy is in 200 g of the food?**

- A 250 kJ
- B 150 kJ
- C 200 kJ
- D 400 kJ

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20 **Photosynthesis produces oxygen at a rate of 2 cm cubed per minute. How much oxygen is produced in 10 minutes?**

- A 40 cm^3
- B 20 cm^3
- C 30 cm^3
- D 10 cm^3

Understand It with Pulse | Flag a mistake

21 **A pondweed plant releases 18 bubbles of oxygen in 3 minutes. How many bubbles does it release per minute?**

A 12

B 6

C 5

D 7

Understand It with Pulse | Flag a mistake

22 **Where does aerobic respiration happen?**

A in the chloroplasts

B in the vacuole

C in the mitochondria

D in the nucleus

Understand It with Pulse | Flag a mistake

23 **What is the basal metabolic rate?**

- A energy from food
- B energy stored as fat
- C energy used at rest
- D energy used in exercise

Understand It with Pulse | Flag a mistake

24 **What is glucose converted into for storage in animals?**

- A fatty acids
- B cellulose
- C glycogen
- D starch

Understand It with Pulse | Flag a mistake

25 **What is glucose made into for storage in a plant?**

A starch

B protein

C cellulose

D chlorophyll

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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