ENGLAND GCSE COMBINED SCIENCE AQA SYNERGY HIGHER · FINAL EXAM · 50 QUESTIONS

Final Exam — 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 to let Brett know so he can fix it.

1 **Eggs can carry Salmonella bacteria. What should you do before eating eggs?**

- A leave them in the sun
- B wash them in cold water
- C cook them thoroughly
- D eat them raw

Understand It with Pulse | Flag a mistake

2 **A sunflower makes glucose in its leaves. Which gas does it take in for photosynthesis?**

A oxygen gas from the air

B nitrogen gas from the air

C hydrogen gas from the air

D carbon dioxide

Understand It with Pulse | Flag a mistake

3 **A thermometer shows a child has a temperature of 39 degrees Celsius. What does a high temperature suggest?**

A the child is dehydrated

B the body is fighting an infection

C the child needs more sleep and rest tonight

D the body is too cold

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

5 **An ice cream cone is put in a freezer. What happens to the liquid?**

- A it evaporates
- B it freezes
- C it boils
- D it condenses

Understand It with Pulse | Flag a mistake

6 **A kite rises higher. What happens to the wind speed usually?**

- A it decreases
- B it stays the same
- C it becomes zero
- D it increases

Understand It with Pulse | Flag a mistake

7 **A red race car travels at a steady speed. What is the resultant force on the car?**

- A 500 N
- B 0 N
- C 1000 N
- D 100 N

Understand It with Pulse | Flag a mistake

8 **A cup of coffee is hot. How is energy transferred to the air?**

- A by condensation on the cold cup
- B by conduction and convection
- C by evaporation only, from the top
- D by radiation only, from the surface

Understand It with Pulse | Flag a mistake

9 **A cell is 24 mm long in a photograph. Its real length is 60 micrometres. What is the magnification?**

- A × 800
- B × 40
- C × 4000
- D × 400

Understand It with Pulse | Flag a mistake

10 **Which neurone carries the impulse from the CNS to the effector?**

- A a motor neurone
- B a sensory neurone
- C a relay neurone
- D a receptor neurone

Understand It with Pulse | Flag a mistake

11 **Which of these is a risk factor for heart disease?**

- A exercising daily
- B eating vegetables
- C smoking
- D drinking water

Understand It with Pulse | Flag a mistake

12 **In a reaction, the energy needed to break bonds is 1000 kJ and the energy released making bonds is 1400 kJ. What is the overall energy change?**

A -1000 kJ

B -400 kJ

C 400 kJ

D 1400 kJ

Understand It with Pulse | Flag a mistake

13 **What is a period in the periodic table?**

A a group

B a block

C a row

D a column

Understand It with Pulse | Flag a mistake

14 **An object travels 400 m in 50 seconds. What is its speed?**

A 4 m/s

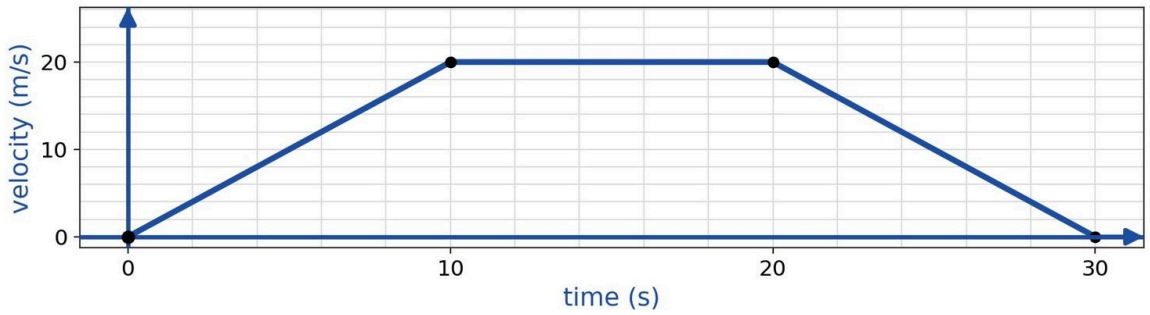
B 20000 m/s

C 16 m/s

D 8 m/s

Understand It with Pulse | Flag a mistake

15 **The graph shows a velocity-time graph. What is the acceleration in the first 10 seconds?**



A 20 m/s²

B 2 m/s²

C 10 m/s²

D 0 m/s²

Understand It with Pulse | Flag a mistake

16 **A solar panel produces 100 W of power. How much energy does it produce in 5 hours?**

- A 500 Wh
- B 600 Wh
- C 1000 Wh
- D 400 Wh

Understand It with Pulse | Flag a mistake

17 **Which structure is found in a bacterial cell but not in an animal cell?**

- A a nucleus
- B a mitochondrion
- C a plasmid
- D a ribosome

Understand It with Pulse | Flag a mistake

18 **What is the name for the gap between two neurones?**

- A a receptor
- B a dendron
- C an effector
- D a synapse

Understand It with Pulse | Flag a mistake

19 **A population grows from 100 to 150. What is the increase?**

- A 60
- B 40
- C 50
- D 100

Understand It with Pulse | Flag a mistake

20 **How can the spread of resistant bacteria be reduced?**

A stop washing hands

B only use antibiotics when needed

C use antibiotics for every illness

D share antibiotics

Understand It with Pulse | Flag a mistake

21 **Which transition metal is used as a catalyst in the Haber process?**

A copper

B platinum

C nickel

D iron

Understand It with Pulse | Flag a mistake

22 **A rocket launches straight up. Which force acts downwards on the rocket?**

A thrust

B gravity

C air resistance

D lift

Understand It with Pulse | Flag a mistake

23 **A 2 kg object moves at 3 m/s. What is its kinetic energy?**

A 4.5 J

B 9 J

C 18 J

D 19 J

Understand It with Pulse | Flag a mistake

24 **What is a finite resource?**

- A a resource that will run out
- B a resource that is recycled
- C a resource from the sea
- D a resource that never runs out

Understand It with Pulse | Flag a mistake

25 **A cell is 18 mm long in a photograph. Its real length is 20 micrometres. What is the magnification?**

- A × 900
- B × 9000
- C × 1800
- D × 90

Understand It with Pulse | Flag a mistake

26

Where are villi found?

A the small intestine

B the mouth

C the stomach

D the large intestine

Understand It with Pulse | Flag a mistake

27

How does stomach acid protect the body?

A it makes antibodies

B it blocks the nose

C it kills pathogens in food

D it digests white blood cells

Understand It with Pulse | Flag a mistake

28 **Which of these is exothermic?**

A photosynthesis

B melting ice

C dissolving ammonium nitrate

D burning a fuel

Understand It with Pulse | Flag a mistake

29 **What is the charge on a chloride ion?**

A Cl^-

B Cl

C Cl^{2-}

D Cl^+

Understand It with Pulse | Flag a mistake

30 **What happens when two objects with opposite charges are near each other?**

A they neutralise

B they repel

C they attract

D nothing happens

Understand It with Pulse | Flag a mistake

31 **A 4 kg object moves at 3 m/s. What is its kinetic energy?**

A 36 J

B 28 J

C 9 J

D 18 J

Understand It with Pulse | Flag a mistake

32 **Why is chlorine added to drinking water?**

A to make it taste better

B to remove solids

C to kill bacteria

D to add fluoride

Understand It with Pulse | Flag a mistake

33 **An ice cream cone melts in the Sun. What is happening to the particles in the ice cream?**

A they lose energy and slow down a lot

B they stop moving

C they get smaller

D they gain energy and move more

Understand It with Pulse | Flag a mistake

34 **A yellow school bus carries children to school. Which blood vessel carries blood away from the heart, like a bus leaving the station?**

- A a ventricle
- B a capillary
- C an artery
- D a vein

Understand It with Pulse | Flag a mistake

35 **Eggs are produced by hens. What is the female reproductive cell called?**

- A an embryo
- B an egg cell
- C a sperm cell
- D a zygote

Understand It with Pulse | Flag a mistake

36 **A forest provides a habitat. What does habitat mean?**

A when an organism sleeps

B what an organism eats

C how an organism breeds

D where an organism lives

Understand It with Pulse | Flag a mistake

37 **A chocolate cake is made from flour, sugar and eggs. Which ingredient provides protein?**

A sugar

B eggs

C flour

D water

Understand It with Pulse | Flag a mistake

38 **A yellow school bus stops at a station. What happens to its speed?**

A it stays the same

B it increases

C it becomes zero

D it becomes negative

Understand It with Pulse | Flag a mistake

39 **A basketball is dropped. What energy store increases as it falls?**

A gravitational potential

B kinetic

C thermal

D elastic

Understand It with Pulse | Flag a mistake

40 **A river provides drinking water. Why must the water be treated before drinking?**

- A to heat it up
- B to make it taste better for drinking
- C to remove harmful substances
- D to add minerals

Understand It with Pulse | Flag a mistake

41 **Eggs contain protein. Which part of the egg is mostly protein?**

- A the yolk
- B the air sac
- C the shell
- D the white

Understand It with Pulse | Flag a mistake

42 **Why does blood go to the lungs?**

A to pick up oxygen

B to be pumped

C to be filtered

D to pick up carbon dioxide

Understand It with Pulse | Flag a mistake

43 **A thermometer measures temperature in degrees Celsius. What is the freezing point of water on this scale?**

A 100

B 10

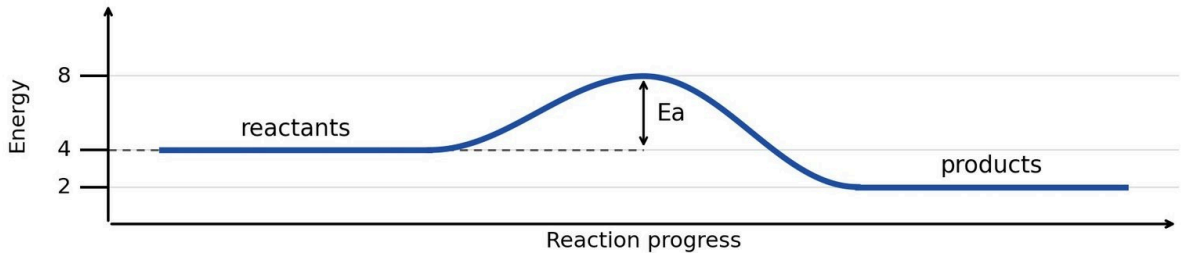
C 32

D 0

Understand It with Pulse | Flag a mistake

44

The diagram shows the energy profile for a reaction. The reactants are at energy 4, the peak is at 8 and the products are at 2. What is the activation energy?



A 4

B 2

C 6

D 12

Understand It with Pulse

Flag a mistake

45 **A thermometer shows a patient's temperature is 39 degrees Celsius. Is this above or below normal body temperature?**

- **A** above normal
- **B** below normal
- **C** exactly normal
- **D** impossible to tell

Understand It with Pulse | Flag a mistake

46 **A guitar amplifier is connected to the mains. What is the voltage of the mains supply in the UK?**

- **A** 110 V
- **B** 12 V
- **C** 230 V
- **D** 50 V

Understand It with Pulse | Flag a mistake

47 **What is the momentum of a 4 kg object moving at 10 m/s?**

A 20 kg m/s

B 40 kg m/s

C 14 kg m/s

D 80 kg m/s

Understand It with Pulse | Flag a mistake

48 **A cheese pizza is cooked in an oven. How is energy transferred in the oven?**

A by radiation and convection

B by condensation on the oven walls

C by conduction only, through the tray

D by evaporation from the cheese

Understand It with Pulse | Flag a mistake

49 **A hot air balloon rises because the air inside it is less dense than the air outside. What happens to the density of air when it is heated?**

- A it stays the same
- B it increases
- C it becomes zero
- D it decreases

Understand It with Pulse | Flag a mistake

50 **Which enzyme breaks down lipids?**

- A lipase
- B protease
- C amylase
- D pepsin

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. C
2. D
3. B
4. A
5. B
6. D
7. B
8. B
9. D
10. A
11. C
12. B
13. C
14. D
15. B
16. A
17. C
18. D
19. C
20. B
21. D
22. B
23. B
24. A
25. A
26. A
27. C
28. D
29. A
30. C
31. D
32. C
33. D
34. C
35. B
36. D
37. B
38. C
39. B
40. C
41. D
42. A
43. D
44. A
45. A
46. C
47. B
48. A
49. D
50. A

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