ENGLAND GCSE COMBINED SCIENCE OCR GATEWAY 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 **What is produced by anaerobic respiration in muscle cells?**

- A lactic acid
- B oxygen
- C ethanol
- D carbon dioxide

Understand It with Pulse | Flag a mistake

2 **A school lunch tray holds a bread roll, cheese and an apple. Which food test would show starch in the bread roll?**

- A Benedict's turns brick red
- B Sudan III turns red
- C Biuret turns purple
- D iodine turns blue-black

Understand It with Pulse | Flag a mistake

3 **What happens to blood vessels in the skin when the body is hot?**

A they close completely

B they widen to lose heat

C they narrow to keep heat in

D they move deeper into the skin

Understand It with Pulse | Flag a mistake

4 **What is a habitat?**

A all the organisms in an area

B where an organism lives

C a population

D a food web

Understand It with Pulse | Flag a mistake

5 **A pea plant with genotype Bb is crossed with a plant with genotype bb. What fraction of the offspring will be bb?**

- A 3/4
- B 1/4
- C 1
- D 1/2

Understand It with Pulse | Flag a mistake

6 **What does tobacco mosaic virus do to a plant?**

- A it stops the roots absorbing water
- B it makes the plant grow taller
- C it causes mottled leaves
- D it turns the flowers red

Understand It with Pulse | Flag a mistake

7 **Why are isotopes with the same proton number the same element?**

A the proton number decides the element

B the mass number decides the element

C the neutron number decides the element

D the electron number decides the element

Understand It with Pulse | Flag a mistake

8 **What is brass made from?**

A copper and zinc

B iron and carbon mixed together

C copper and tin mixed together

D zinc and tin mixed together

Understand It with Pulse | Flag a mistake

9 **Which pair of metals gives the biggest voltage in a cell?**

A zinc and iron in the same cell

B copper and zinc in the same cell

C iron and copper in the same cell

D magnesium and copper

Understand It with Pulse | Flag a mistake

10 **Which metal is least reactive?**

A magnesium

B gold

C zinc

D iron

Understand It with Pulse | Flag a mistake

11 **In the combustion of methane, the energy needed to break the bonds is 1000 kJ and the energy released when new bonds form is 1400 kJ. What is the overall energy change?**

- A 1400 kJ
- B -400 kJ
- C 400 kJ
- D -1000 kJ

Understand It with Pulse | Flag a mistake

12 **How do humans increase carbon dioxide?**

- A by using solar power to make electricity
- B by planting trees
- C by burning fossil fuels
- D by recycling waste

Understand It with Pulse | Flag a mistake

13 **A block has a mass of 400 g and a volume of 250 cubic centimetres. What is its density?**

- A 3.2 g/cm³
- B 1.6 g/cm³
- C 4.6 g/cm³
- D 0.8 g/cm³

Understand It with Pulse | Flag a mistake

14 **An object speeds up from 5 m/s to 15 m/s in 10 seconds. What is its acceleration?**

- A 2 m/s²
- B 0.5 m/s²
- C 10 m/s²
- D 1 m/s²

Understand It with Pulse | Flag a mistake

15 **What is electric current?**

- A the flow of energy
- B the flow of heat
- C the flow of electrons only
- D the flow of charge

Understand It with Pulse | Flag a mistake

16 **What do all electromagnetic waves travel at in a vacuum?**

- A the speed of sound
- B different speeds
- C the speed of light
- D zero speed

Understand It with Pulse | Flag a mistake

17 **What is nuclear power fuelled by?**

A hydrogen

B coal

C uranium

D oil

Understand It with Pulse | Flag a mistake

18 **Which of these is a non-renewable energy resource?**

A wind

B hydroelectric

C coal

D solar

Understand It with Pulse | Flag a mistake

19 **A pondweed plant releases 30 bubbles of oxygen in 3 minutes. How many bubbles does it release per minute?**

A 11

B 9

C 20

D 10

Understand It with Pulse | Flag a mistake

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

A eating vegetables

B drinking water

C smoking

D exercising daily

Understand It with Pulse | Flag a mistake

21 **What does insulin do?**

A it raises blood glucose

B it lowers blood glucose

C it breaks down glycogen in the liver

D it stores glucose in the blood

Understand It with Pulse | Flag a mistake

22 **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 2

B 200

C 40

D 20

Understand It with Pulse | Flag a mistake

23 **Which animal was the first cloned from an adult cell?**

- A a farm cow
- B a laboratory mouse
- C a pet dog
- D Dolly the sheep

Understand It with Pulse | Flag a mistake

24 **Cases of a disease double every week. There are 20 cases now. How many cases will there be in 2 weeks?**

- A 40
- B 80
- C 60
- D 160

Understand It with Pulse | Flag a mistake

25 **An atom of calcium loses 2 electrons. What is the charge on the ion formed?**

A +1

B -2

C +2

D 0

Understand It with Pulse | Flag a mistake

26 **Which substance has a giant ionic structure?**

A sodium chloride

B carbon dioxide, a simple molecule

C water, a simple molecule

D methane, a simple molecule

Understand It with Pulse | Flag a mistake

27 **Which piece of apparatus measures the volume of acid in a titration?**

A a pipette

B a beaker

C a measuring cylinder

D a burette

Understand It with Pulse | Flag a mistake

28 **What are the products when a metal reacts with dilute hydrochloric acid?**

A a salt and oxygen

B an oxide and hydrogen

C a salt and hydrogen

D a salt and water

Understand It with Pulse | Flag a mistake

29 **In an exothermic reaction, are the products higher or lower in energy than the reactants?**

- A lower
- B higher then lower
- C higher
- D the same

Understand It with Pulse | Flag a mistake

30 **An alkane has 5 carbon atoms. How many hydrogen atoms does one molecule have?**

- A 14
- B 12
- C 8
- D 10

Understand It with Pulse | Flag a mistake

31 **What is internal energy?**

A the heat lost to the room

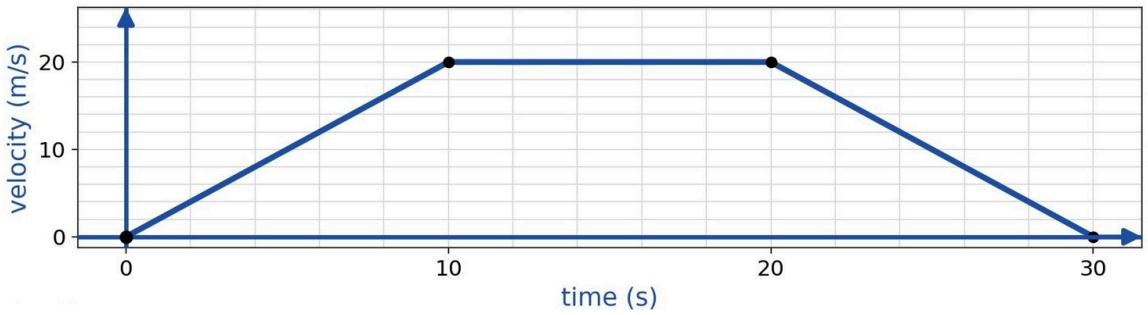
B the total energy of the particles

C the energy of the container and the room

D the energy of one particle only

Understand It with Pulse | Flag a mistake

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



A 2 m/s²

B 10 m/s²

C 0 m/s²

D 20 m/s²

Understand It with Pulse | Flag a mistake

33 **A wristwatch is used to time a race. What is speed calculated from?**

- A distance and time
- B mass and time together
- C distance only, not time
- D time only, not distance

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

35 **A bicycle is ridden uphill. Which energy store increases?**

A elastic potential energy

B thermal energy from friction

C kinetic energy of motion

D gravitational potential

Understand It with Pulse | Flag a mistake

36 **A passenger aeroplane cruises. Which force opposes its motion?**

A lift

B drag

C weight

D thrust

Understand It with Pulse | Flag a mistake

37 **Why are school cultures incubated at 25 degrees Celsius, not 37 degrees Celsius?**

A to avoid growing microbes that harm humans

B to save electricity in the laboratory

C to stop the agar from melting

D to make the bacteria grow more slowly for counting

Understand It with Pulse | Flag a mistake

38 **A sandwich is eaten. Which enzyme digests the starch in the bread?**

A protease

B amylase

C lipase

D pepsin

Understand It with Pulse | Flag a mistake

39 **Which neurone carries the impulse from the receptor to the CNS?**

- A a motor neurone
- B a sensory neurone
- C a relay neurone
- D an effector neurone

Understand It with Pulse | Flag a mistake

40 **Why are quadrats placed randomly?**

- A to get a fair sample
- B to save time
- C to avoid counting
- D to find the most organisms

Understand It with Pulse | Flag a mistake

41 **What are the three domains of life?**

A Animals, Plants and Fungi

B Prokaryotes, Eukaryotes and Viruses

C Archaea, Bacteria and Eukaryota

D Bacteria, Viruses and Fungi

Understand It with Pulse | Flag a mistake

42 **Why is a hybridoma useful?**

A it makes identical antibodies

B it stops tumours growing

C it makes many different antibodies

D it kills cancer cells directly

Understand It with Pulse | Flag a mistake

43 **What did Newlands notice about the elements?**

- A the lightest elements were all gases
- B every element had a different mass
- C the elements fell into groups of three with matching properties
- D every eighth element had similar properties

Understand It with Pulse | Flag a mistake

44 **In chromatography, what is the stationary phase?**

- A the spots
- B the ruler
- C the paper
- D the solvent

Understand It with Pulse | Flag a mistake

45 **Lemons contain citric acid. What is the pH of lemon juice likely to be?**

- A 7
- B 12
- C 2
- D 14

Understand It with Pulse | Flag a mistake

46 **How do you test for sulfate ions?**

- A a glowing splint relights
- B limewater turns cloudy
- C barium chloride gives a white precipitate
- D silver nitrate gives a yellow precipitate

Understand It with Pulse | Flag a mistake

47 **A thermometer is placed in hot water. What happens to the liquid inside the thermometer?**

A it contracts

B it freezes

C it evaporates

D it expands

Understand It with Pulse | Flag a mistake

48 **An alloy is 50 percent copper. How much copper is in 200 kg of the alloy?**

A 75 kg

B 200 kg

C 100 kg

D 125 kg

Understand It with Pulse | Flag a mistake

49 **How much energy is needed to heat 1 kg of a substance with a specific heat capacity of 2100 J per kg per degree Celsius by 10 degrees Celsius?**

- A 2100 J
- B 21000 J
- C 10500 J
- D 42000 J

Understand It with Pulse | Flag a mistake

50 **A rocket is pushed up by hot gases. What is the upward force called?**

- A thrust
- B drag
- C lift
- D weight

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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