ENGLAND GCSE COMBINED SCIENCE OCR GATEWAY FOUNDATION · 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 **A peach contains a stone. What is inside the stone?**

- A a flower
- B a seed
- C a root
- D a leaf

Understand It with Pulse | Flag a mistake

2 **A heart beats 70 times per minute. How many beats is that in one hour?**

- A 4800
- B 4200
- C 8400
- D 3600

Understand It with Pulse | Flag a mistake

3 **What is a reflex action?**

A a hormonal response

B a fast automatic response

C a learned behaviour

D a slow thought-out response

Understand It with Pulse | Flag a mistake

4 **A field has 1000 kg of grass. If 10 percent of the energy passes to the rabbits, how much grass biomass supports the rabbits?**

A 200 kg

B 100 kg

C 1000 kg

D 50 kg

Understand It with Pulse | Flag a mistake

5 **Which disorder is caused by a dominant allele?**

A haemophilia

B cystic fibrosis

C polydactyly

D sickle cell anaemia

Understand It with Pulse | Flag a mistake

6 **How does a vaccine protect a person?**

A it stops pathogens entering

B memory cells respond quickly later

C it kills all pathogens at once, straight away

D it makes the skin thicker

Understand It with Pulse | Flag a mistake

7 **An element is in period 4 of the periodic table. How many electron shells do its atoms have?**

A 4

B 6

C 5

D 3

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8 **Why does diamond not conduct electricity?**

A it is made of ions not atoms

B it has no covalent bonds at all

C it has no free electrons

D its atoms are too far apart

Understand It with Pulse | Flag a mistake

9 **What is the pH of a neutral solution?**

A 0

B 1

C 14

D 7

Understand It with Pulse | Flag a mistake

10 **A metal is added to a salt solution and no reaction happens. What does that tell you?**

A the salt is not soluble

B the metal is less reactive than the metal in the salt

C the metal is a gas

D the metal is more reactive than the metal in the salt

Understand It with Pulse | Flag a mistake

11 **In an experiment, 20 cubic centimetres of gas are made in 10 seconds. What is the rate of the reaction?**

- **A** 4 cm^3/s
- **B** 200 cm^3/s
- **C** 2 cm^3/s
- **D** 1 cm^3/s

Understand It with Pulse | Flag a mistake

12 **What is the general formula of the alkenes?**

- **A** CnH_2n
- **B** CnH_2n+_2
- **C** CnH_2n-_2
- **D** CnHn

Understand It with Pulse | Flag a mistake

13 **How much energy is needed to heat 4 kg of a substance with a specific heat capacity of 4200 J per kg per degree Celsius by 20 degrees Celsius?**

- A 168000 J
- B 336000 J
- C 672000 J
- D 16800 J

Understand It with Pulse | Flag a mistake

14 **A force of 50 N acts 4 m from a pivot. What is the moment of the force?**

- A 210 Nm
- B 100 Nm
- C 400 Nm
- D 200 Nm

Understand It with Pulse | Flag a mistake

15 **A lamp runs at 12 V with a current of 4 A. What is its power?**

- A 58 W
- B 96 W
- C 48 W
- D 24 W

Understand It with Pulse | Flag a mistake

16 **Which electromagnetic wave has the highest frequency?**

- A infrared
- B radio waves, which are the lowest
- C microwaves
- D gamma rays

Understand It with Pulse | Flag a mistake

17 **How can heat loss from a house be reduced?**

A by insulating the loft

B by removing curtains

C by turning the heating up

D by opening windows

Understand It with Pulse | Flag a mistake

18 **Which of these reduces the force on a driver in a crash?**

A a much heavier car body

B a faster speed

C a longer stopping time

D a harder seat

Understand It with Pulse | Flag a mistake

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

A it decreases

B it increases

C it stops

D it stays the same

Understand It with Pulse | Flag a mistake

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

A a sperm cell

B an egg cell

C an embryo

D a zygote

Understand It with Pulse | Flag a mistake

21 **How does sweating cool the body?**

A sweat evaporates from the skin

B sweat blocks the pores

C sweat carries heat into the blood

D sweat warms the skin surface

Understand It with Pulse | Flag a mistake

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

A it removes carbon dioxide

B it stops plants growing

C it recycles nutrients

D it makes the soil warmer

Understand It with Pulse | Flag a mistake

23 **What is a binomial name?**

- A the kingdom and phylum of the organism
- B the family and order of the organism
- C genus plus species
- D the common name of the organism

Understand It with Pulse | Flag a mistake

24 **Which is a physical defence of a plant?**

- A a waxy cuticle
- B an antimicrobial chemical
- C white blood cells
- D antibodies in the sap

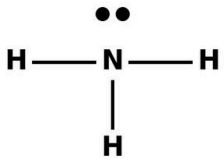
Understand It with Pulse | Flag a mistake

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

- **A** the electron number decides the element
- **B** the neutron number decides the element
- **C** the proton number decides the element
- **D** the mass number decides the element

Understand It with Pulse | Flag a mistake

26 **The diagram shows an ammonia molecule. How many covalent bonds does the nitrogen atom form?**



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

Understand It with Pulse | Flag a mistake

27 **What is the relative formula mass of water, H_2O?**

A 10

B 20

C 18

D 16

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

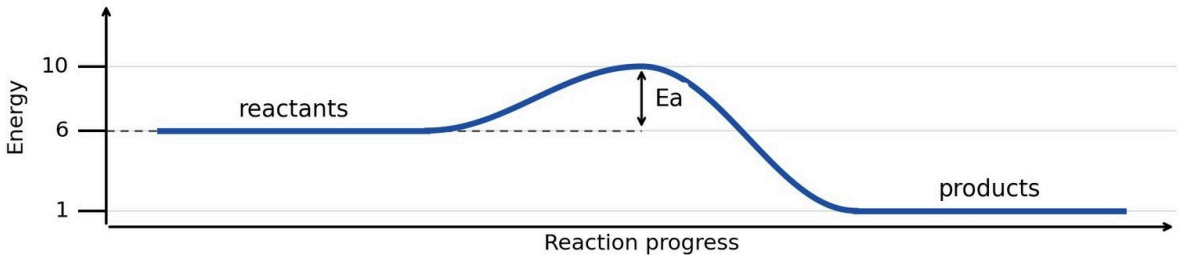
B an oxide and hydrogen

C a salt and water

D a salt and hydrogen

Understand It with Pulse | Flag a mistake

29 **The diagram shows the energy profile for a reaction. The reactants are at energy 6, the peak is at 10 and the products are at 1. What is the activation energy?**



A 5

B 9

C 16

D 4

Understand It with Pulse | Flag a mistake

30 **A town sends 200 tonnes of waste to landfill per week. How much waste is that in one year?**

- A 10300 tonnes
- B 20800 tonnes
- C 10500 tonnes
- D 10400 tonnes

Understand It with Pulse | Flag a mistake

31 **A 10 kg block has a specific heat capacity of 200 J/kg degrees Celsius. Its temperature rises by 20 degrees Celsius. How much energy is needed?**

- A 40000 J
- B 80000 J
- C 40500 J
- D 20000 J

Understand It with Pulse | Flag a mistake

32 **What is terminal velocity?**

A top steady falling speed

B the speed when drag is zero

C the speed of sound in air

D the speed when an object starts to fall

Understand It with Pulse | Flag a mistake

33 **Hardcover books have mass. What is mass measured in?**

A kilograms

B joules

C newtons, the unit of force

D watts

Understand It with Pulse | Flag a mistake

34 **A calculator uses a battery. What energy is stored in the battery?**

A thermal energy from heat

B chemical energy

C light energy from the Sun

D kinetic energy of motion

Understand It with Pulse | Flag a mistake

35 **A bicycle freewheels downhill. What happens to its speed?**

A it stays the same

B it becomes zero

C it increases

D it decreases

Understand It with Pulse | Flag a mistake

36 **A red race car has a large rear wing. What does the wing do?**

- A increases grip
- B reduces grip
- C reduces drag to zero
- D increases speed

Understand It with Pulse | Flag a mistake

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

- A nitrogen gas from the air
- B oxygen gas from the air
- C hydrogen gas from the air
- D carbon dioxide

Understand It with Pulse | Flag a mistake

38 **A school lunch tray holds a meal with bread, cheese and an apple. Which food group is the bread from?**

A proteins, for growth

B fats, for insulation

C vitamins, for health

D carbohydrates

Understand It with Pulse | Flag a mistake

39 **Blood glucose falls from 9 mmol per litre to 5 mmol per litre. What is the fall?**

A 3 mmol/L

B 6 mmol/L

C 5 mmol/L

D 4 mmol/L

Understand It with Pulse | Flag a mistake

40 **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

Understand It with Pulse | Flag a mistake

41 **A peach tree flowers in spring. What do bees carry between flowers?**

- A leaves
- B water
- C seeds
- D pollen

Understand It with Pulse | Flag a mistake

42 **Cases of a disease double every week. There are 10 cases now. How many cases will there be in 2 weeks?**

A 80

B 20

C 40

D 30

Understand It with Pulse | Flag a mistake

43 **Where are metals found in the periodic table?**

A at the top

B in the middle only

C on the right

D on the left

Understand It with Pulse | Flag a mistake

44 **Paintbrushes are cleaned in water. Why does the paint wash off?**

- A the paint dissolves
- B the paint freezes in the water
- C the paint melts in the water
- D the paint burns in the water

Understand It with Pulse | Flag a mistake

45 **What is the relative formula mass of carbon dioxide, CO_2?**

- A 28
- B 44
- C 40
- D 32

Understand It with Pulse | Flag a mistake

46 **What does mass spectrometry measure?**

A the masses of particles

B the volume of a gas

C the colours of a flame

D the temperature of a sample

Understand It with Pulse | Flag a mistake

47 **In a second experiment, 50 cm cubed of gas are made in 15 seconds. What is the rate of the reaction?**

A 3.3333 cm^3/s

B 3.8333 cm^3/s

C 2.8333 cm^3/s

D 4.8333 cm^3/s

Understand It with Pulse | Flag a mistake

48 **What conditions are used to make ethanol from ethene?**

A hydrogen and a cold catalyst

B oxygen and a very high pressure

C steam and a catalyst

D cold water and no catalyst

Understand It with Pulse | Flag a mistake

49 **A block has a mass of 1000 g and a volume of 200 cubic centimetres. What is its density?**

A 2.5 g/cm³

B 10 g/cm³

C 8 g/cm³

D 5 g/cm³

Understand It with Pulse | Flag a mistake

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

A lift

B drag

C thrust

D weight

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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