ENGLAND GCSE COMBINED SCIENCE OCR TWENTY FIRST CENTURY 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 **Horses eat grass. What trophic level are horses?**

- A decomposers
- B primary consumers
- C secondary consumers
- D producers

Understand It with Pulse | Flag a mistake

2 **What is cancer?**

- A a blocked blood vessel
- B a lack of white blood cells
- C uncontrolled cell division
- D a virus infecting the body

Understand It with Pulse | Flag a mistake

3 **Why are quadrats placed at random?**

- A to cover the whole area
- B to avoid bias
- C to save time in the field
- D to find the rarest plants

Understand It with Pulse | Flag a mistake

4 **An enzyme reaction is fastest at 30 degrees Celsius. At 50 degrees Celsius the rate is much lower. Why?**

- A the substrate runs out
- B the enzyme is digested
- C the enzyme works faster
- D the enzyme is denatured

Understand It with Pulse | Flag a mistake

5 **Which plant hormone ripens fruit?**

A adrenaline

B ethene

C gibberellin

D auxin

Understand It with Pulse | Flag a mistake

6 **What is a binomial name?**

A the family and order of the organism

B genus plus species

C the kingdom and phylum of the organism

D the common name of the organism

Understand It with Pulse | Flag a mistake

7 **In the combustion of methane, the energy needed to break the bonds is 800 kJ and the energy released when new bonds form is 1000 kJ. What is the overall energy change?**

A 200 kJ

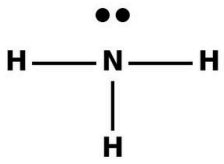
B -800 kJ

C 1000 kJ

D -200 kJ

Understand It with Pulse | Flag a mistake

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



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

Understand It with Pulse | Flag a mistake

9 **What gas is made at the positive electrode in aluminium extraction?**

- **A** aluminium metal from the ore
- **B** hydrogen gas from the acid used
- **C** oxygen gas from the air around it
- **D** carbon dioxide

Understand It with Pulse | Flag a mistake

10 **Why is graphene strong?**

A it has weak forces between its atoms

B it is made of metal ions in a lattice

C its atoms are joined in a strong layer

D its layers slide over each other easily

Understand It with Pulse | Flag a mistake

11 **Why are instrumental methods better than chemical tests?**

A they are fast, sensitive and accurate

B they work on solids only

C they are cheap and need no training at all

D they need no sample at all

Understand It with Pulse | Flag a mistake

12 **A solution has a hydrogen ion concentration of 10^{-1}mol per cubic decimetre. What is its pH?**

- A 1
- B 3
- C 0
- D 2

Understand It with Pulse | Flag a mistake

13 **Which electromagnetic waves are used to take pictures of bones?**

- A X-rays
- B radio waves
- C visible light
- D infrared

Understand It with Pulse | Flag a mistake

14 **A 5 kg object is lifted 10 m. Use g = 10 N/kg. What is the gain in gravitational potential energy?**

- A 50 J
- B 1000 J
- C 250 J
- D 500 J

Understand It with Pulse | Flag a mistake

15 **What is the unit of current?**

- A the amp
- B the watt
- C the ohm
- D the volt

Understand It with Pulse | Flag a mistake

16 **Why does a faster car have a longer stopping distance?**

- A it covers more distance overall
- B the road gets longer
- C its brakes work less well at speed
- D the driver reacts faster

Understand It with Pulse | Flag a mistake

17 **A sample starts with 8000 counts per minute. After one half-life, what is the count rate?**

- A 16000
- B 2000
- C 4000
- D 8000

Understand It with Pulse | Flag a mistake

18 **How much energy is needed to change 2 kg of a substance from solid to liquid, if the specific latent heat is 334000 J per kg?**

A 334002 J

B 334000 J

C 1336000 J

D 668000 J

Understand It with Pulse | Flag a mistake

19 **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

20 **How does antibiotic resistance spread in bacteria?**

A bacteria learn to avoid antibiotics

B resistant bacteria survive and reproduce

C antibiotics change the bacteria genes directly

D viruses carry resistance to bacteria

Understand It with Pulse | Flag a mistake

21 **Red apples are cut and left in air. Why do they turn brown?**

A they ferment into alcohol

B enzymes react with oxygen

C they freeze in the cold

D they dry out in the air

Understand It with Pulse | Flag a mistake

22 **Which cell contains chloroplasts?**

A a muscle cell

B a leaf cell

C a nerve cell

D a red blood cell

Understand It with Pulse | Flag a mistake

23 **What is glucagon?**

A a nerve signal

B a hormone that lowers blood glucose

C a hormone that raises blood glucose

D an enzyme

Understand It with Pulse | Flag a mistake

24 **What is climate change?**

A a cold winter

B a hot summer

C changing weather patterns

D a very hot summer that lasts

Understand It with Pulse | Flag a mistake

25 **What is the main gas in the air today?**

A argon

B carbon dioxide

C oxygen

D nitrogen

Understand It with Pulse | Flag a mistake

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

- **A** +2
- **B** -2
- **C** 0
- **D** +1

Understand It with Pulse | Flag a mistake

27 **What is the half equation for oxygen gas forming at the anode?**

- **A** $O_2 \rightarrow 2O^{2-} + 4e^-$
- **B** $2O^{2-} + 4e^- \rightarrow O_2$
- **C** $2O^{2-} \rightarrow O_2 + 4e^-$
- **D** $4O^{2-} \rightarrow 2O_2 + 4e^-$

Understand It with Pulse | Flag a mistake

28 **What is galvanising?**

A coating iron with copper

B coating iron with zinc

C coating iron with plastic

D coating iron with paint

Understand It with Pulse | Flag a mistake

29 **What is the test for hydrogen?**

A a glowing splint relights

B limewater turns cloudy

C bromine water turns colourless

D a lighted splint pops

Understand It with Pulse | Flag a mistake

30 **What is neutralisation?**

A an acid reacting with a base

B a base reacting with water

C an acid evaporating

D an acid reacting with a metal

Understand It with Pulse | Flag a mistake

31 **Why does light bend when it enters a different material?**

A its colour changes

B it loses energy

C it becomes sound

D its speed changes

Understand It with Pulse | Flag a mistake

32 **What is an advantage of solar power?**

A it works in any weather at all

B it needs no panels

C it works at night

D no carbon dioxide is made

Understand It with Pulse | Flag a mistake

33 **Glass marbles are used to model atoms. What is a limitation of the model?**

A marbles cannot be counted accurately at all

B marbles are too small to see properly

C marbles are the wrong colour for atoms

D marbles are much bigger than atoms

Understand It with Pulse | Flag a mistake

34 **A red race car speeds up on a straight track. What is the resultant force doing?**

A causing a turn

B doing nothing

C causing acceleration

D causing deceleration

Understand It with Pulse | Flag a mistake

35 **A hot air balloon cools down. What happens?**

A it bursts

B it sinks

C it stays still

D it rises faster

Understand It with Pulse | Flag a mistake

36 **A ladder is used to reach a roof. What is the ladder an example of?**

- A a simple machine
- B a lever only
- C a complex machine
- D a power source

Understand It with Pulse | Flag a mistake

37 **How many chromosomes does a human gamete have?**

- A 92
- B 46
- C 12
- D 23

Understand It with Pulse | Flag a mistake

38 **What is a benign tumour?**

A a tumour that spreads around the body

B a tumour caused by a virus

C a tumour that stays in one place

D a tumour that cannot be treated

Understand It with Pulse | Flag a mistake

39 **Red apples contain vitamin C. What is vitamin C needed for?**

A making red blood cells

B strong bones and teeth

C good eyesight at night

D healthy skin and gums

Understand It with Pulse | Flag a mistake

40

Why is bile alkaline?

A it dissolves fat in water

B it neutralises stomach acid

C it makes enzymes work in acid

D it kills bacteria in food

Understand It with Pulse | Flag a mistake

41

How does shivering help when the body is cold?

A muscles use less energy

B the skin loses heat

C muscles release heat

D blood flow increases

Understand It with Pulse | Flag a mistake

42 **What does the fossil record show?**

A life changed over time

B fossils are all the same age

C fossils never change

D all animals lived at once

Understand It with Pulse | Flag a mistake

43 **About what percentage of the air is oxygen?**

A 21%

B 78%

C 0.04%

D 1%

Understand It with Pulse | Flag a mistake

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

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

Understand It with Pulse | Flag a mistake

45 **What is the relative formula mass of the alkane C_2H_6?**

- A 30
- B 32
- C 28
- D 42

Understand It with Pulse | Flag a mistake

46 **Which stage of a life cycle assessment covers digging up raw materials?**

A use

B disposal

C extraction

D manufacture

Understand It with Pulse | Flag a mistake

47 **What happens to the white precipitate of aluminium hydroxide in excess sodium hydroxide?**

A it dissolves

B it turns brown at once

C it turns blue at once

D it forms more precipitate

Understand It with Pulse | Flag a mistake

48 **A solution has a concentration of 1 mol per cubic decimetre. How many moles are in 2 cubic decimetres of the solution?**

A 2 mol

B 4 mol

C 3 mol

D 1 mol

Understand It with Pulse | Flag a mistake

49 **What is the period of a wave?**

A the distance between peaks

B the number of waves per second

C the time for one wave to pass

D the height of the wave

Understand It with Pulse | Flag a mistake

50 **Which of these is a renewable energy resource?**

A coal

B oil

C wind

D natural gas

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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