عرض جميع الأسئلة عرض التغذية الراجعة عرض المعلومات المساعدة

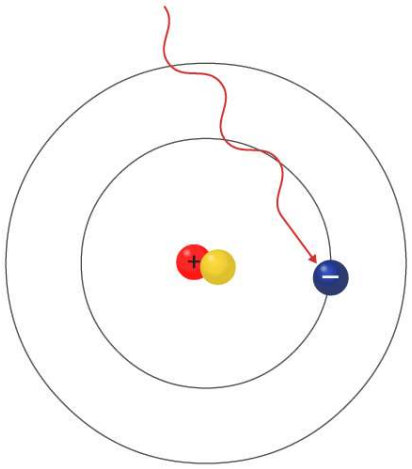
السؤال 1

Drag and drop the correct answers.

Study the diagram showing an atom alongside.

Energy in the form of a photon ✓ arrives from outside ✓ the atom.

The atom then absorbs ✓ this energy.

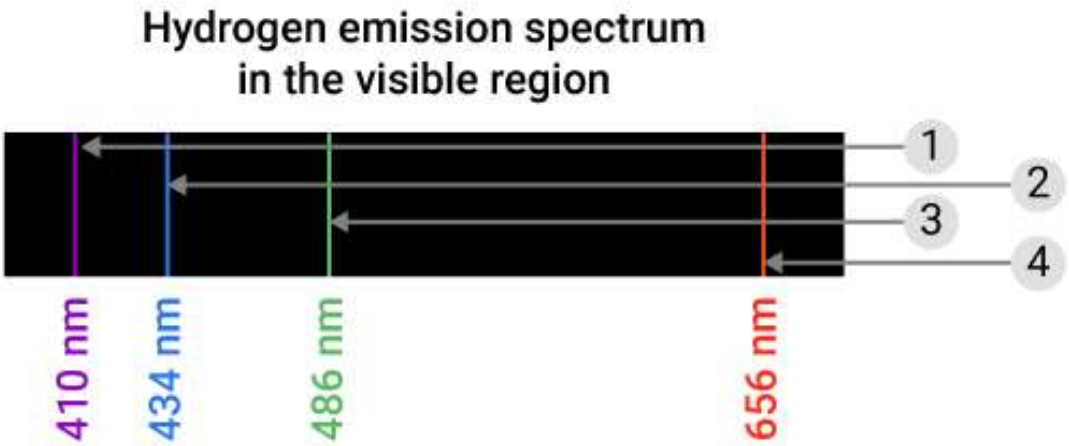


inside electron reflects

السؤال 2

Select the correct answer.

Study the emission spectrum alongside.



What characteristic

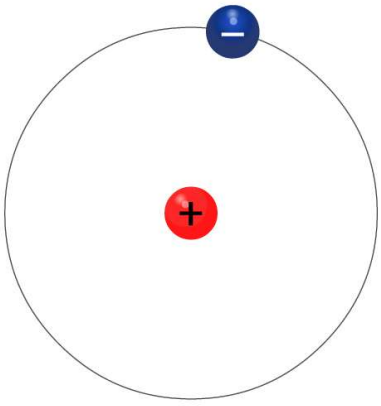
does wavelength 2 have?

- [x] has a large energy difference between a larger orbit and a smaller orbit
- [ ] has the smallest energy difference between a larger orbit and a smaller orbit
- [ ] the shortest wavelength
- [ ] has a small energy difference between a larger orbit and a smaller orbit

السؤال 3

Fill in the blank with the correct term from the Word Bank.

Word Bank			
ground	excited	unstable	negative



The diagram alongside shows an atom that has returned to a(n) ground ✓ state.

السؤال 4

Select your answer from the drop-down menu.

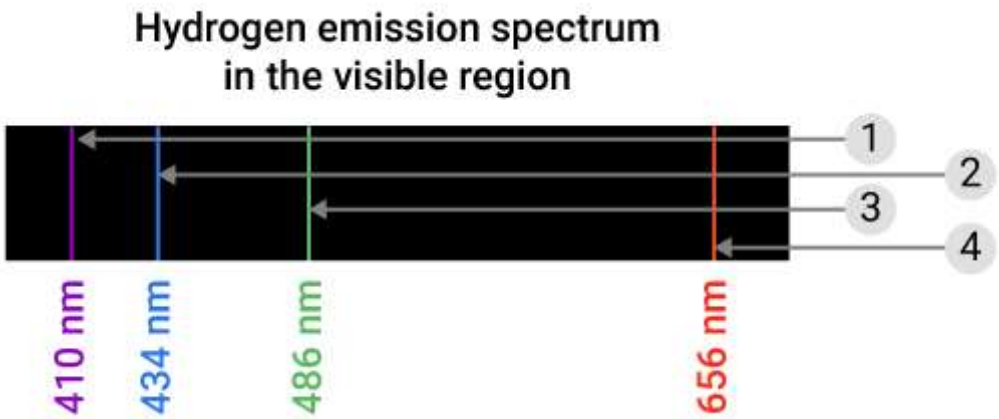
The Lyman series refers to emissions that fit into the ultraviolet ✓ range.

السؤال 5

Select the correct answers.

Study the emission spectrum alongside.

What characteristics do wavelength 1 have?



- [ ] is a photon emitted as a blue-violet visible light
- [x] the shortest wavelength ✓
- [ ] has the smallest energy difference between a larger orbit and a smaller orbit
- [ ] is a photon emitted as a red visible light
- [ ] the longest wavelength
- [x] has the biggest energy difference between a larger orbit and a smaller orbit ✓

السؤال 6

Fill in the blank with the correct NUMBER.

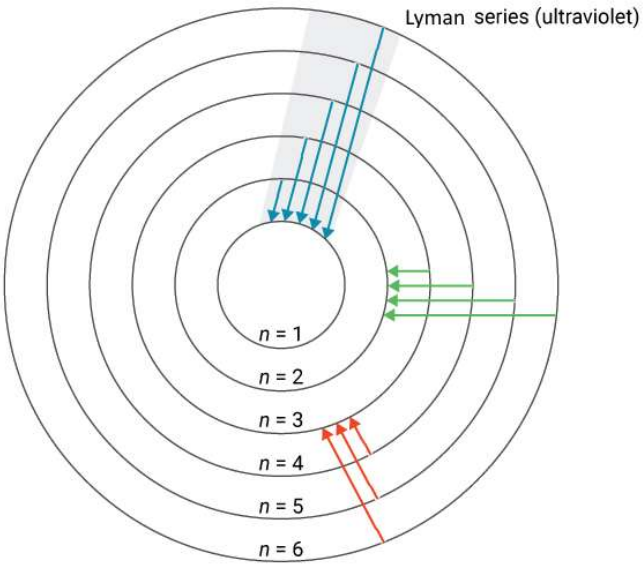
Study the diagram showing the Lyman series alongside.

After absorbing the energy in the form of a photon, the atom's excitation peaks at an electron orbit of n =

6 ✓ .

The electron emits a photon of the same energy it previously absorbed, creating ultraviolet wavelengths as it drops back to a ground state at n =

1 ✓ .



السؤال 7

Select the correct answer.

When an electron drops from a higher-energy orbit to a lower-energy orbit, _____.

- ○ the atom changes its charge
- ✓ a photon is emitted
- ○ it gains an electron

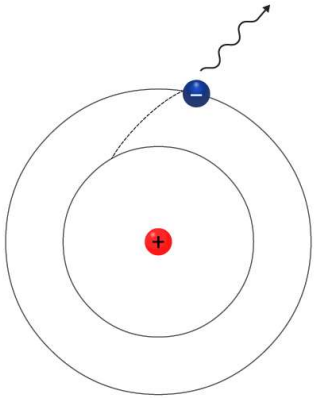
the atom is raised to an excited state

السؤال 8

Select the correct answer.

Study the diagram showing an atom alongside.

In which state is this atom?



neutral

excited ✓

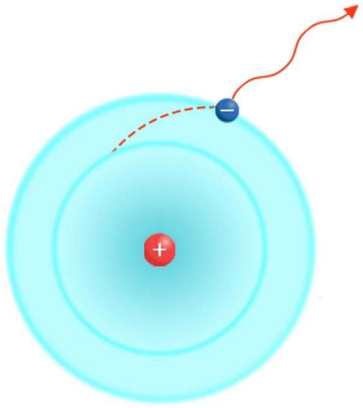
absorption

ground

السؤال 9

Select the correct answer.

Study the diagram showing an atom alongside.



When an atom drops from its excited state, it emits a(n) _____.

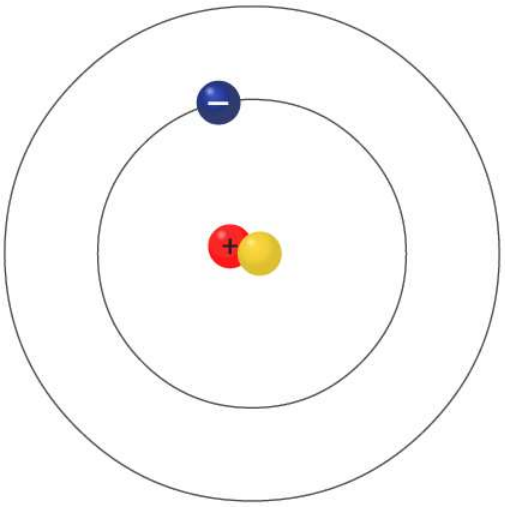
- proton
- photon ✓
- electron
- neutron

السؤال 10

Select the correct answer.

Study the diagram of a hydrogen atom (H) alongside.

Which state does this diagram show?



- neutral
- ground ✓
- excited
- absorption

السؤال ١١

Fill in the blank with the correct term from the Word Bank.

Word Bank			
ground	outer	smaller	larger

When a hydrogen atom absorbs energy, the electron moves to a larger ✓ orbit.

السؤال 12

Fill in the blank with the correct term from the Word Bank.

Word Bank			
radiates	does not radiate	transforms	destroys

When a hydrogen atom is in the ground state, it **does not radiate** ✓ energy.

السؤال 13

Select the correct answer.

Which series refers to emissions in the infrared range?

- ○ Atomic Emission Spectrum
- ✓ Paschen series
- ○ Balmer series
- ○ Lyman series

السؤال 14

Drag and drop the correct terms.

The Balmer series refers to emissions that fit into the visible range.

These emissions occur when electrons drop from a larger orbit back to the n = 2 level.

Lyman | Paschen | 3 | 1

السؤال 15

Select the correct terms from the drop-down menus.

Four electron transitions account for the visible lines in hydrogen's atomic emission spectrum.

In addition, scientists discovered that hydrogen also releases infrared and ultraviolet light at different frequencies.