

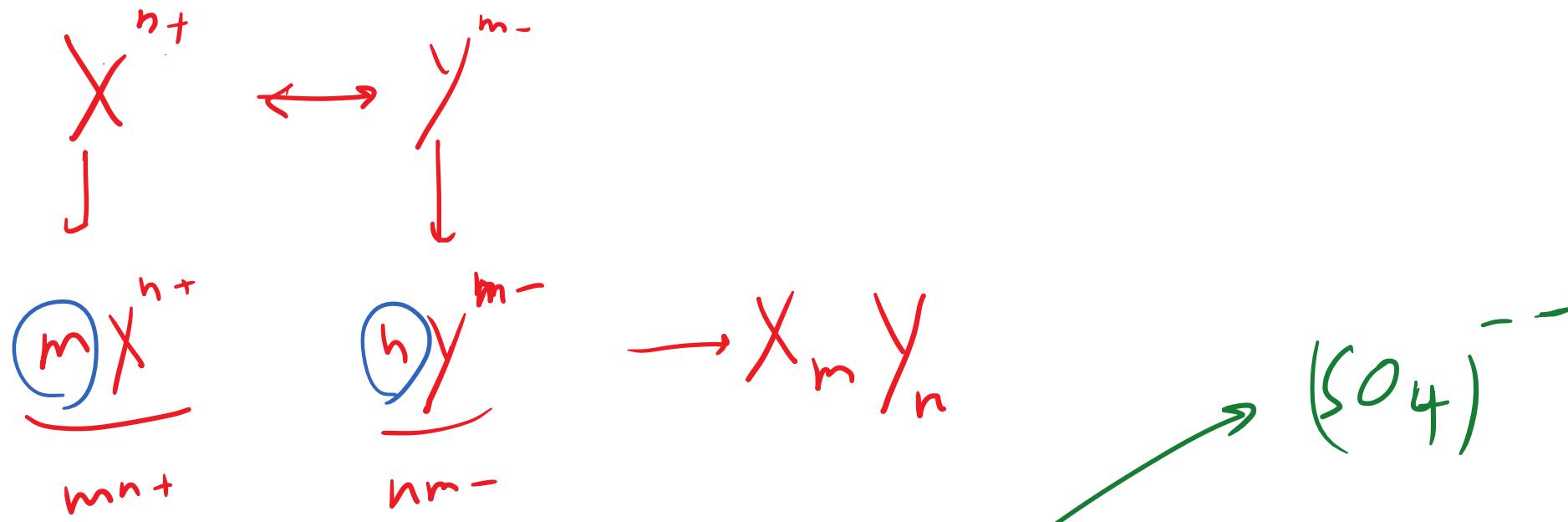
کاربزیز کردن: یوناں نکل کر جم (مکمل افلاز کے) باروں  
هدف: خاندز کردن

حروف

The aim of galvanization (coating with zinc) of an object made of iron is

- A. increasing its mechanical resistance
- B. giving it a better look
- C. increasing its electrical resistance
- D. safeguarding it from corrosion
- E. increasing its weight

فوردیک  
فرانزیز  
(زئنک زدن)



A salt is formed by the ions  $Al^{+++}$  and  $SO_4^{2-}$ . Its chemical formula is

- A.  $Al_2(SO_4)_3$
- B.  $Al(SO_4)_3$
- C.  $Al_3(SO_4)_2$
- D.  $Al_3SO_8$
- E.  $Al_2SO_4$



Which one of the following transformations generates more heat for the same amount of converted substance?

- A. Neutralization of an acid with a base
- B. Freezing of liquid water into ice
- C. Condensation of vapour into liquid water
- D. Combustion of methane with oxygen
- E. Combustion of methanol with oxygen

آرڈر ایجاد کرنے کا سرچ بالا سرچ کا ایک بہترین جائزہ ہے (الٹرمن بلر میخ  
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Consider the five following electronic transitions in an atom of hydrogen, where  $n_i$  represents the initial principal quantum number, and  $n_f$  represents the final principal quantum number.

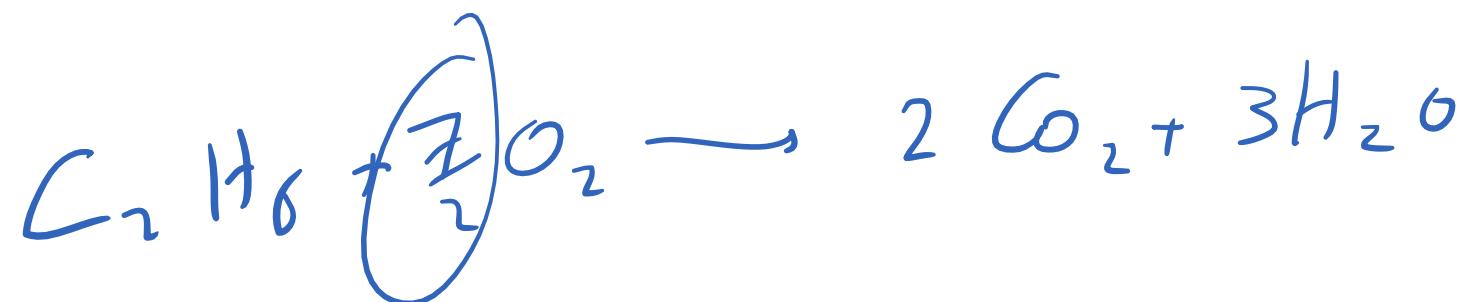
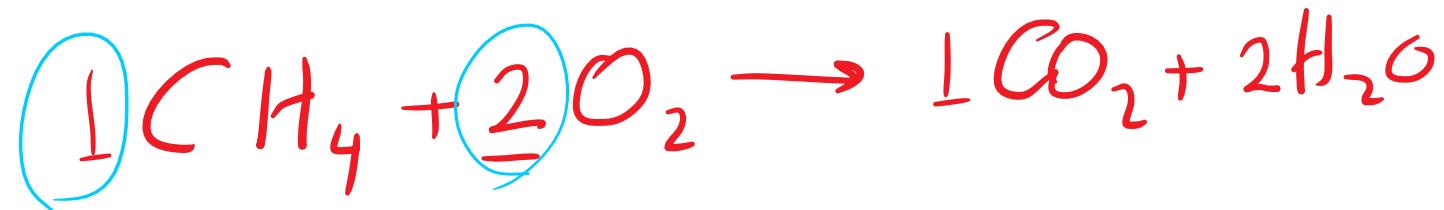
	I	II	III	IV	V
$n_i$	3	5	4	7	2
$n_f$	5	3	7	8	7

In which transition does the atom lose energy?

- A. II
- B. III
- C. IV
- D. I
- E. V

Methane,  $\text{CH}_4$ , burns with oxygen producing  $\text{CO}_2$  and  $\text{H}_2\text{O}$ . How many cubic meters of oxygen are needed to burn  $1 \text{ m}^3$  of methane?

- A.  $1,5 \text{ m}^3$
- B.  $1,0 \text{ m}^3$
- C.  $3,0 \text{ m}^3$
- D.  $0,5 \text{ m}^3$
- E.  $2,0 \text{ m}^3$



## An endothermic chemical reaction

- A. yields heat to the surroundings
- B. absorbs heat from the surroundings
- C. leads to an increase of the total number of moles
- D. cannot take place
- E. always takes place in a close container

The electron configuration of an atom of phosphorus is  $1s^2 2s^2 2p^6 3s^2 3p^3$ . How many electrons does it contain?

- A. 30
- B. 15
- C. 5
- D. 11
- E. 14

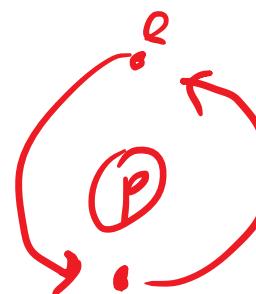
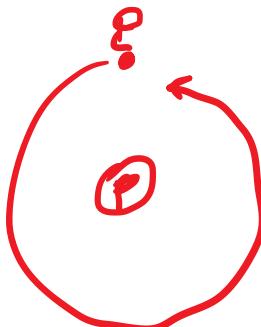
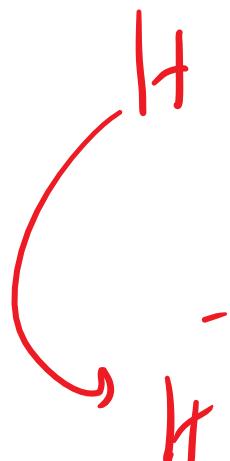
Which of the following properties of water ( $H_2O$ ) is affected by gravity?

- A. Vapour pressure
- B. Melting temperature
- C. Boiling temperature
- D. Density  $\rightarrow \rho \leftarrow \frac{m}{V}$
- E. Specific weight

$$\rho_g \leftarrow \frac{w}{g}$$

The ion  $H^-$  has the same electronic configuration as an atom of

- A. He
- B. Xe
- C. Ar
- D. Ne
- E. Kr



Which one of the following chemical elements is an alkali metal?

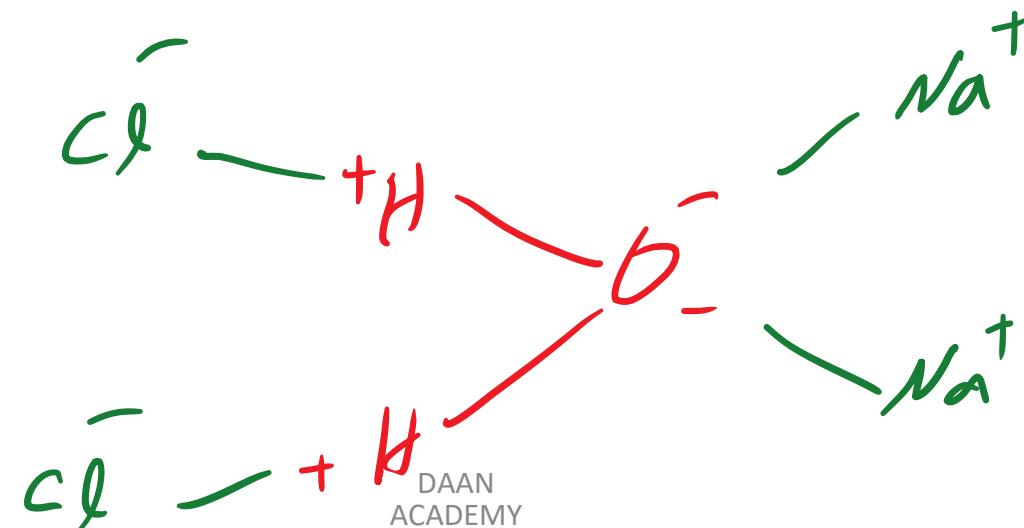
- A. Silver
- B. Aluminium
- C. Fluorine
- D. Uranium
- E. Sodium

مذکور فلزات  
عنصر که از اینها چند نمودن بجز میشود  
فلزات که از اینها

$\text{Na}^+$ ,  $\text{Cl}^-$

The salt typically used for cooking -  $\text{NaCl}$  - dissolves easily in water because

- A. the atoms Na and Cl are produced in water
- B. the ions  $\text{Na}^+$  and  $\text{Cl}^-$  are strongly attracted by the molecules of water
- C. it reacts with water to produce  $\text{HCl}$  and  $\text{NaOH}$ , which are soluble
- D. the molecules of water have a greater kinetic energy than salt
- E. it melts into a liquid



To induce the chemical change  $O_2 \rightarrow 2O$  we must

- A. subtract energy
- B. supply energy
- C. lower the temperature
- D. decrease the volume
- E. increase pressure

1g of NaCl dissolves into one litre of distilled and degassed water. The pH of the solution is

- A. negative
- B. greater than the pH of water
- C. greater or less than the pH of water, depending on the temperature
- D. less than the pH of water
- E. basically equal to the pH of water

Which one of the following elements is a solid at room pressure and temperature?

- A. Neon
- B. Magnesium
- C. Bromine
- D. Hydrogen
- E. Mercury