

1 章 試 験

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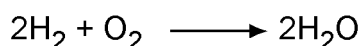
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1. 次の語句の日本語訳を各々の括弧内に書きなさい（各2点）。

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| 1. deoxyribonucleic acid | 1. (デオキシリボ核酸) |
| 2. double helix | 2. (二重らせん) |
| 3. ribonucleic acid | 3. (リボ核酸) |
| 4. protein | 4. (タンパク質／蛋白質) |
| 5. amino acid | 5. (アミノ酸) |
| 6. eukaryote | 6. (真核生物) |
| 7. Archaea | 7. (古細菌) |
| 8. prokaryote | 8. (原核生物) |
| 9. covalent bond | 9. (共有結合) |
| 10. electrostatic interaction | 10. (静電(的)相互作用) |
| 11. hydrogen bond | 11. (水素結合) |
| 12. van der Waals interaction | 12. (ファンデルワールス相互作用) |
| 13. hydrophobic effect | 13. (疎水性効果) |
| 14. stereochemistry | 14. (立体化学) |
| 15. space-filling model | 15. (空間充填モデル) |

2. 四角の中に単語あるいは数字を選択肢から選び入れて文章を完成させなさい（各2点）。

A spark applied to the mixture initiates a chemical reaction in which hydrogen and oxygen combine to form water :



If the temperature of the system is held constant, the entropy of the system decreases because 3 moles of two differing reactants have been combined to form 2 moles of a single product. However, the reaction releases a significant amount of heat into the surroundings, and this heat will increase the entropy of the surrounding molecules by increasing their random movement. The entropy increase in the surroundings is enough to allow water to form spontaneously from hydrogen and oxygen.

語句選択肢 : increase, decrease, 1, 2, 3, 4, 5, enthalpy, entropy, molecules, atoms, (複数回使用有) hydrogen, water, reaction, dynamics, constant, different, heat, changes, system, unit, oxygen, process, bond