

3 章 試 験

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番号	氏名
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1. 各設問の答えとなるアミノ酸を3文字記号で書きなさい（各2点）。

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| 1. 側鎖として1個の水素をもつアミノ酸は何か？ | 1. | (Gly) |
| 2. 芳香環側鎖をもつ4種類のアミノ酸は何か？ | 2-1. | (Phe) |
| | 2-2. | (Tyr) |
| | 2-3. | (Trp) |
| | 2-4. | (His) |
| 3. 水酸基(-OH基)を含む芳香族以外の2種類のアミノ酸は何か？ | 3-1. | (Ser) |
| | 3-2. | (Thr) |
| 4. 酸性側鎖をもつ2種類のアミノ酸は何か？ | 4-1. | (Asp) |
| | 4-2. | (Glu) |
| 5. チオール基(-SH基)を含むアミノ酸は何か？ | 5. | (Cys) |
| 6. 塩基性側鎖をもつ2種類のアミノ酸は何か？ | 6-1. | (Lys) |
| | 6-2. | (Arg) |
| 7. 上記5以外で疎水性側鎖をもつ3種類のアミノ酸は何か？ | 7-1. | (Val) |
| | 7-2. | (Leu) |
| | 7-3. | (Ile) |

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1点）。

The distance between adjacent amino acids along a β strand is approximately 3.5 Å, in contrast with a distance of 1.5 Å along an α helix. The side chains of adjacent amino acids point in opposite directions. A β sheet is formed by linking two or more β strands by hydrogen bonds. Adjacent chains in a β sheet can run in opposite directions (antiparallel β sheet) or in the same direction (parallel β sheet). In the antiparallel arrangement, the NH group and the CO group of each amino acid are respectively hydrogen bonded to the CO group and the NH group of a partner on the adjacent chain. In schematic diagrams, β -strands are usually depicted by broad arrows pointing in the direction of the C-terminal end to indicate the type of β sheet formed - parallel or antiparallel.

語句選択肢： coil, helix, helices, strand, strands, sheet, sheets, peptide, peptides, (複数回使用有) same, opposite, adjacent, 1.5, 1.8, 3.5, 3.6, 5.4, single, covalent, bands, hydrogen, NH, NH₃⁺, proteins, diagrams, CO, COO⁻, N, C, distance, vertical, antiparallel, ribbons, arrows, maps, type, process, direction.