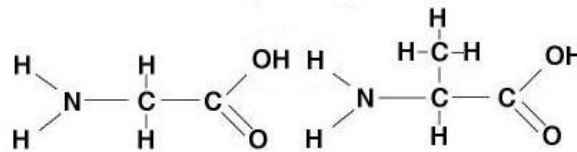


Appendix 4 – Student’s Test

1. Complete the following passage with the most appropriate terms

Polymers can be assembled by reactions of in which an atom of of a monomer binds to a group of a second monomer to form a molecule of

2. Two amino acids are given:



A. In the diagram above, highlight with a circle the atoms (or atomic groups) that are eliminated in the formation of the peptide bond between the first and second amino acids.

B. Write below the formulas of the products of the reaction between the two amino acids:

..... +

3. By cooking an egg, the proteins contained in it undergo a modification:

- A. What is this modification called?
- B. Is it reversible or not?
- C. What happens at the molecular level to the modified proteins?

4. Choose the two correct answers.

Which of the following are probably not affected by the denaturation of a protein?

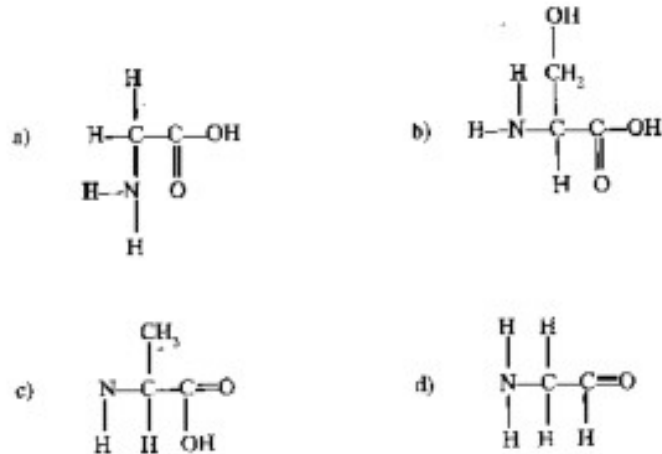
- A. peptide bonds
- B. hydrogen bonds
- C. the primary structure
- D. the tertiary structure

5. Choose the two correct answers.





Collagen, myosin, haemoglobin:

- A. contain C, H, O, N
- B. all have tertiary structure only
- C. are made up of amino acids
- D. all have a structural function
- E. all have the same amino acid sequences

6. By treating wool with NaOH you get:
- the keratin flocculation
 - the keratin extraction
 - the keratin precipitation
 - the keratin sedimentation
7. Which of these molecules do you think are amino acids?



8. At the end of the first experience we obtained:
- a solution
 - a colloidal solution
 - a liquid
 - a precipitate
9. The isoelectric point of a protein is:
- the temperature at which the molecule has zero electric charge
 - the pH value at which the molecule has zero electric charge
 - the ddp to be applied to precipitate the protein
 - the pH value at which the protein denatures
10. A student conducts a biuret test on the tubes shown below.

Test tube 1	Test tube 2	Test tube 3	Test tube 4
			
Negative control	Positive control	Solution containing a protein	Solution containing a protein and protease

.....
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A. Complete the table by indicating the color obtained in each tube after the test.

B. Why were tubes 1 and 2 used?

.....

C. Motivate the result obtained in test tube 4.

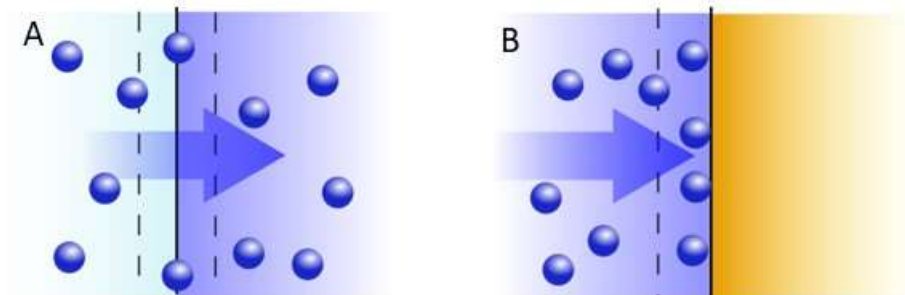
.....

11. The biuret test is used to check for the presence of:

- A.** nucleic acids
- B.** polypeptides
- C.** amino acids
- D.** dipeptides

12. In laboratory experience number 4, wool has proven effective as an adsorbent material against Cu^{2+} ions.

A. Which of the two images below best represents adsorption?



B. Write a short definition of:

- i.** Absorption:
-
- ii.** Adsorption:
-