

Name (Printed): _____,
(last) (first)

Signature: _____ /32 (Overall on Quiz¹)

1. (8 points) For the following tripeptide, draw the accurate molecular structure at the indicated pH. Be sure to draw in **every atom** and also to **draw in any lone pairs and/or charges** on Nitrogen, Oxygen, and Sulfur atoms. Give the net (total) charge for the tripeptide at this pH.

Ile-Pro-Tyr

pH = 11.72

Total Charge = _____

Amino Acid	pK ₁	pK ₂	pK _R
Ile	2.32	9.76	-
Pro	1.95	10.64	-
Tyr	2.20	9.21	10.46

/8 (Question #1)

¹ These 32 points = twice the total for questions #1 and #2.

Name (Printed): _____, _____
(last) (first)

2. (8 points) Clearly describe the structure of the alpha-Helix units found in proteins. Be sure to include a complete description of what forces hold an alpha-Helix together. Relate the alpha-Helix structure to the structure of Keratin.²

/8 (Question #2)

² Note: The answer for question # 2 must fit inside the box below.

Name (Printed): _____ Answers _____
 (last) (first)

Signature: _____ /32 (Overall on Quiz¹)

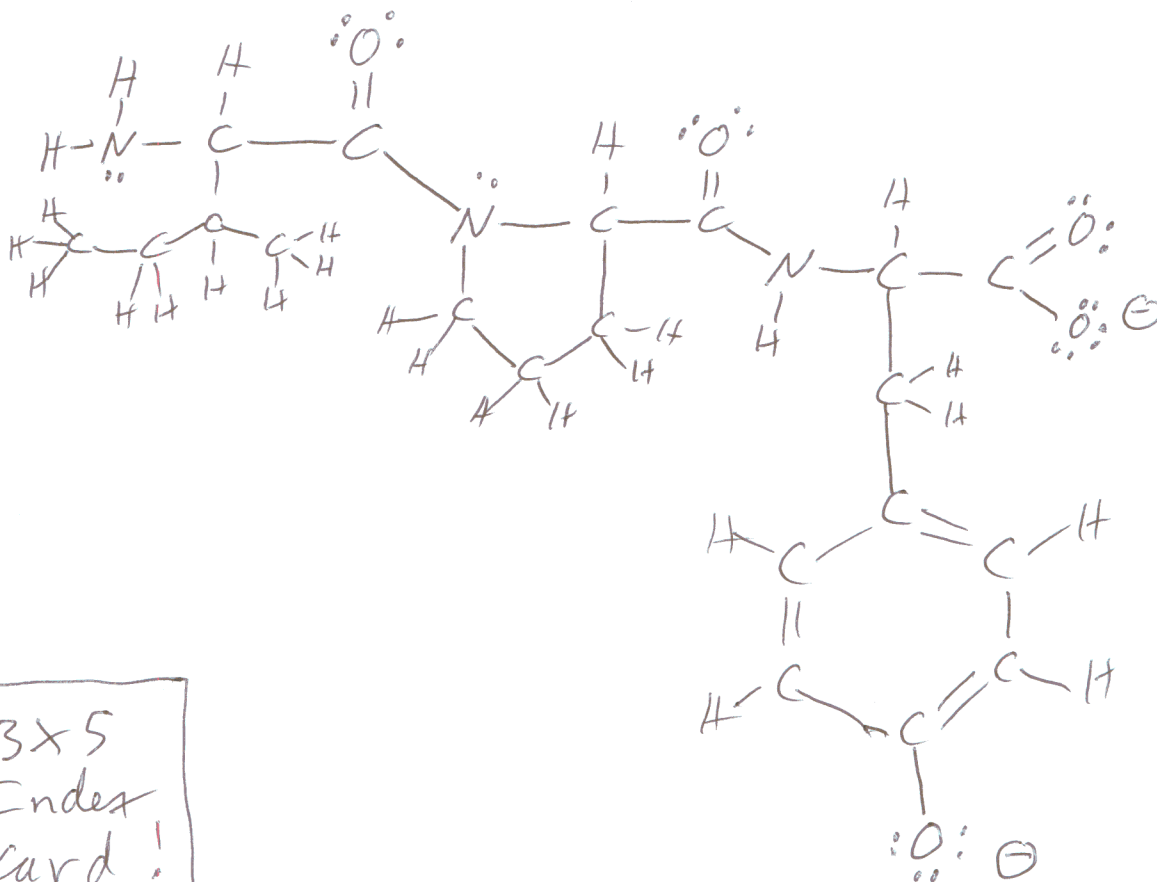
1. (8 points) For the following tripeptide, draw the accurate molecular structure at the indicated pH. Be sure to draw in every atom and also to draw in any lone pairs and/or charges on Nitrogen, Oxygen, and Sulfur atoms. Give the net (total) charge for the tripeptide at this pH.

Ile-Pro-Tyr

pH = 11.72

Total Charge = -2

Amino Acid	pK ₁	pK ₂	pK _R
Ile	2.32	9.76	-
Pro	1.95	10.64	-
Tyr	2.20	9.21	10.46



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card!
Only

/8 (Question #1)

¹ These 32 points = twice the total for questions #1 and #2.