

 南台科技大學 100 學年度研究所考試入學招生考試

系組： 生技系

准考證號碼：

科目： 生物化學(211)

(請考生自行填寫)

注意事項	一、請先檢查准考證號碼、報考系(組)別、考試科目名稱，確定無誤後再作答。 二、所有答案應寫於答案紙上，否則不予計分。 三、作答時應依試題題號，依序由上而下書寫，作答及未作答之題號均應抄寫。
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問答題，每題 10 分。

1. Under what conditions are ketone bodies produced?
2. What is the metabolic purpose of linking a fatty acid to coenzyme A?
3. Which enzymes are at the control points in glycolysis?
4. Explain a reason for carrying out enzymatic reaction in buffer solutions.
5. Explain a reason why amino acids are usually soluble at pH than they are at neutral pH.
6. Why might a person who is an alcoholic have a "fatty liver"?
7. Describe the various purposes of the citric acid cycle.
8. List four fat-soluble vitamins, and give a physiological role for each.
9. A sample of a peptide of unknown sequence was treated with trypsin; another sample of the same peptide was treated with chymotrypsin. The sequences (N-terminal to C-terminal) of the smaller peptides produced by trypsin digestion were as followings:

Met-Val-Ser-Thr-Lys

Val-Ile-Trp-Thr-Leu-Met-Ile

Leu-Phe-Asn-Glu-Ser-Arg

The sequences of the smaller peptides produced by chymotrypsin digestion were as follows:

Asn-Glu-Ser-Arg-Val-Ile-Trp

Thr-Lys-Met-Ile

Met-Val-Ser-Thr-Lys- Leu-Phe

Deduce the sequence of the original peptide.

10. Explain why ice is less dense than water.