C 485 Quiz 8

Name________________________
Legible please!

Each problem is worth ½ pt unless otherwise noted. There is no partial credit.

1) 2 pt total. Match the items in the left hand column with the correct precursor(s) from the right hand column. (Items in the right hand column may be used more than once, but do not put multiple numbers as your answer.)

Tyrosine 3
Valine 5
Proline 7
Serine 6
Isoleucine 2
Threonine 8
Arginine 7
Orotidine 1

1) carbamoylphosphate, aspartate
2) Pyruvate, alpha-ketobutyrate
3) pyruvate, erythrose 4-phosphate
4) 5-phosphoribosyl pyrophosphate
5) pyruvate
6)3-phosphoglycerate
7) alpha-ketoglutarate
8) oxaloacetate

2) The nonaromatic carbons of tryptophan are derived from what precursor? What cofactor is involved in this reaction?

3) Leucine is derived from the same pathway that generates valine. What additional carbon source is used in this synthesis? The later stages of leucine's biosynthetic pathway are similar to what other pathway?

4) (1pt) Two different amidation methods are used to install side chain amides in amino acids. Describe these two methods and match them to the relevant amino acid.

5) Which amino acid is derived from oxaloacetate and pyruvate? What carbon piece is lost in this process? What cofactor plays a role in this process (acronym okay)?

6) The methyl group of methionine is derived from what common amino acid? What cofactor catalyzes this cleavage reaction and which cofactor acts as the carbon acceptor (acronyms are okay)?