Which of the following amino acids is classified as a non-polar aromatic amino acid?

A. Tyrosine

B. Phenylalanine

C. Histidine

D. GlutamineCorrect

answer: B

Which of these amino acids has the smallest R group?

a) Alanine

b) Glycine

c) Serine

d) Threonine

Answer:B

----------contains a side chain with an **imidazole** ring that includes how many nitrogen atoms?

A. Histidine,1

B. Histidine,2

C. Tryptophan ,1

D. Tryptophan ,2

Answer:B

Which amino acid has an aromatic side chain and contains a hydroxyl group making it polar?

A. Tryptophan

B. Phenylalanine

C. Tyrosine

D. Methionine

answer:C

Which non-polar aromatic amino acid contains an indole ring in its side chain?

A. Tyrosine

B. Phenylalanine

C. Tryptophan

D. Histidine

Answer:C

In a laboratory experiment, it was observed that one of the amino acids participates in strong oxidation reactions and contributes to the formation of disulfide bonds between protein molecules. Which of the following amino acids has a terminal sulfur group that explains this observation?

- A. Methionine
- B. Serine
- C. Cysteine
- D. Glutamine

Answer:B

Which of the following statements is true regarding the reactivity of amino acids with sulfur in their side chains?

- A. Cysteine is less reactive than Methionine due to its thioether group.
- B. Methionine is highly reactive because of its thiol group.
- C. Cysteine is highly reactive because of its thiol group, while Methionine is less reactive due to its thioether group.
- D. Both Cysteine and Methionine are equally reactive due to their similar sulfur-containing side chains.

Answer:C

Arrange the following positively charged amino acids in ascending order based on the number of nitrogen atoms in their side chains:

- A. Histidine, Lysine, Arginine
- B. Lysine, Histidine, Arginine
- C. Lysine, Arginine, Histidine
- D. Histidine, Arginine, Lysine

answer: B

Which of the following is true about positively charged amino acids?

A. All of them contain sulfur in their side chains.

B. All of them have a side chain with an aromatic ring.

C. All of them have a side chain with 4 carbon atoms.

D. All of them are hydrophobic.

Answer:C

What is the common feature of the side chains of arginine, histidine, and lysine?

A. They are hydrophobic.

B. They contain sulfur.

C. They contain nitrogen and are positively charged at physiological pH.

D. They have aromatic rings.

Answer:C

Which of the following has a guanidinium ?

A. Lysine

B. Arginine

C. Histidine

D. Glutamine

Answer: B

Which amino acid has a side chain that contains both an amide group and nitrogen?

A. Glutamine

B. Glutmate

C. Methionine

D. A+B

Answer:A

Asparagine and Glutamine are classified as what type of amino acids based on their side chains?

A. Nonpolar

B. Polar uncharged

C. Acidic

D. Basic

Answer:B

The amino acid _____ is unique because it is the only cyclic amino acid and has ---------- Nitrogen in its structure.

- A. Proline,secondary
- B. Proline,primary
- C. Alanine,secondary
- D. Alanine,primary

Answer:A

Which of the following amino acids does not contain a nitrogen atom in its side chain?

- A. Alanine
- B. Cysteine
- C. Asparagine
- D. Arginine

Answer:A

Which amino acid has an aromatic R group and contains 9 carbon atoms?

a) Tryptophan

b) Phenylalanine

c) Tyrosine

d) Histidine

Answer:B

How many carbon atoms are there in the R group of Leucine?

a) 2

b) 3

c) 4

d) 5

Answer:B

Which of the following amino acids contains a sulfhydryl (–SH) group in its R group? a) Methionine

b) Cysteine

c) Threonine

d) Aspartate

Answer:B