Practice Question Set For A-Level
Subject : Chemistry
Paper-2 Topic: AminoAcids, Proteins & DNA

Merit Minds
www.merit-minds.com
Exam Preparation and Free Resources

Name of the Student:_____
Max. Marks : 17 Marks **Time : 17 Minutes**

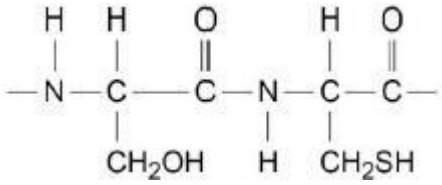
Mark Schemes

Q1.

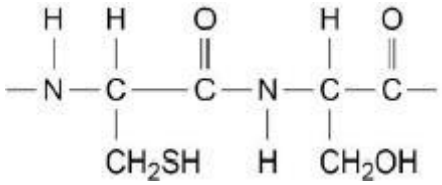
(a) Primary

1

(b)



OR



M1 for correct peptide link (Allow -CONH- as a minimum)

M1

M2 for the correct amino acid R groups
Dipeptide can only score M1

M2

*Trailing bonds **not** needed*

(c) Water

Allow H_2O

1

(d) Two Cys R groups form a disulfide bridge/link stated or described
Could score via a correct diagram showing min -SS-

M1

Ser and Asp R groups form Hydrogen bonds
Allow H bonds

M2

Disulfide bridges are stronger than H bonds
Interactions between cys R groups are stronger

M3

Because disulfide bridges are covalent bonds (while H bonds aren't)
Because covalent bonds are stronger (than H bonds)

Downloaded from www.merit-minds.com

M4

(e) Ionic bond

1

[9]

Downloaded from www.merit-minds.com

Q2.

B

hydrogen bonds

[1]

Downloaded from www.merit-minds.com

Q3.

B

$CH_3CH(NH_2)CH_2COOH$

[1]

Downloaded from www.merit-minds.com

Q4.

(a) **M1** $\frac{27}{80}$ = 0.34

1

M2 glycine

M1 *some relevant working is needed to arrive at 0.325 - 0.35*

no ECF based on ***M1***

1

(b) use uv lamp or ninhydrin

allow *developing / locating agent / iodine*

1

(c) each amino acid has different (relative) affinity/attraction to/solubility in stationary and mobile phases

allow *reference to different solubility in solvent OR different affinity for stationary phase*

1

[4]

Downloaded from www.merit-minds.com

Q5.

C

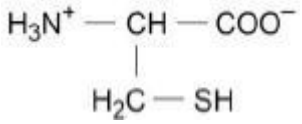
Base 1 *cytosine* ***Base 2*** *guanine*

[1]

Downloaded from www.merit-minds.com

Q6.

D



[1]

Downloaded from www.merit-minds.com