Mark schemes

Q1.

(c)

Ignore reference to dimers.

1. A condensation reaction joins monomers together **and** forms a (chemical) bond **and** releases water;

2. A hydrolysis reaction breaks a (chemical) bond between monomers **and** uses water;

3. A suitable example of polymers and the monomers from which they are made;

3. and 4. Polymers must contain many monomers.

3. and 4: suitable examples include

- *amino acid **and** polypeptide, protein, enzyme, antibody or specific example*
- *nucleotide **and** polynucleotide, DNA or RNA*
- *<u>Alpha</u> glucose **and** starch/glycogen*
- *<u>Beta</u> glucose **and** cellulose.*

If neither specific carbohydrate example is given, allow monosaccharide/glucose and polysaccharide.

3. and 4. Reject (once) reference to triglycerides.

4. A second suitable example of polymers and the monomers from which they are made;

5. Reference to a correct bond within a named polymer;

Reject reference to ester bond.

5

[15]

Q2.

(a)

Letter	Statement
B;	is a monomer in an enzyme's active site
D;	is a monomer in cellulose
C;	is produced during photosynthesis and respiration
B;	forms a polymer that gives a positive result with a biuret test

Must be in correct order

4

Q3.

(a) (a monomer is a smaller / repeating) unit / molecule from which larger molecules / polymers are made;

Reject atoms / elements / 'building blocks' for units / molecules

Ignore examples

1