| Question | Answers | Extra information | Marks | AO /  Spec ref. |
| --- | --- | --- | --- | --- |
| **01** | many  monomers  double |  | 1  1  1 | AO1  C7.3.1 |
| **02** | ethene — poly(ethene)  monosaccharide — cellulose  amino acid — protein |  | 1  1  1 | AO1  C7.3.1  C7.3.4 |
| **03** | Layout Disk 1:01_Q2A Media:OUP:GCSE Kerboodle Worksheets:Design HO 03/17:z_Source:Priority 1 – 31st March:PNGs:AQA Chemistry C11-C15 ESQs:oxo_aqa16_c11ss_xq01_awfg01a.png — Layout Disk 1:01_Q2A Media:OUP:GCSE Kerboodle Worksheets:Design HO 03/17:z_Source:Priority 1 – 31st March:PNGs:AQA Chemistry C11-C15 ESQs:oxo_aqa16_c11ss_xq01_awfg01h.png  *add2 OS:Users:add2:Downloads:Small design handover:oxo_AQA16_C11_pt01_awfg08.png* —  *Layout Disk 1:01_Q2A Media:OUP:GCSE Kerboodle Worksheets:Design HO 03/17:z_Source:Priority 1 – 31st March:PNGs:AQA Chemistry C11-C15 ESQs:oxo_aqa16_c11ss_xq01_awfg01c.png* — *Layout Disk 1:01_Q2A Media:OUP:GCSE Kerboodle Worksheets:Design HO 03/17:z_Source:Priority 1 – 31st March:PNGs:AQA Chemistry C11-C15 ESQs:oxo_aqa16_c11ss_xq01_awfg01d.png* | **1** mark for each correct link;  more than one line from monomer box gets no mark. | 3 | AO2  C7.3.1 |
| **04.1** | (very) strong/flexible/hardwearing | Accept does not rot/not biodegradable. | 1 | AO2  C7.3.1 |
| **04.2** | propene | No mark if more than one box ticked. | 1 | AO2  C7.3.1 |
| **04.3** | addition | No mark if more than one box ticked. | 1 | AO1  C7.3.1 |
| **04.4** | *Layout Disk 1:01_Q2A Media:OUP:GCSE Kerboodle Worksheets:Design HO 03/17:z_Source:Priority 1 – 31st March:PNGs:AQA Chemistry C11-C15 ESQs:oxo_aqa16_c11ss_xq01_awfg02b.png* | No mark if more than one box ticked. | 1 | AO2  C7.3.1 |
| **04.5** | poly(tetrafluoroethene) | Brackets required. | 1 | AO2  C7.3.1 |
| **05.1** | starch  cellulose |  | 1  1 | AO2  C7.3.4 |
| **05.2** | DNA **or** deoxyribonucleic acid |  | 1 | AO2  C7.3.4 |
| **06.1** | chloroethene | Accept vinyl chloride. | 1 | AO2  C7.3.1 |
| **06.2** | Smooth line of best fit touching all points. | Do **not** accept ‘dot to dot’ lines. | 1 | AO3  C7.3.1 |
| **06.3** | constant thickness **or** width of strips | Accept length. | 1 | AO3  C7.3.1 |
| **06.4** | Subtracted initial length (or 10cm)from stretched length. |  | 1 | AO3  C7.3.1 |
| **06.5** | The strip snapped/broke. | Accept any sensible reason. | 1 | AO3  C7.3.1 |
| **06.6** | poly(ethene)  the graph/line/curve is steeper/rises more quickly | Accept ‘the extensions increase sooner/more quickly/with less force’. | 1  1 | AO3  C7.3.1 |
| **07** | **Level 3 (5–6 marks):** There is a reasonably detailed description of the structure **and** explanation of the importance. | | 6 | AO1×4  AO2×2  C7.3.4 |
| **Level 2 (3–4 marks):** There is a basic description of the structure and explanation of the importance. | |
| **Level 1 (1–2 marks):** There is a basic description of the structure or explanation of the importance. | |
| **Level 0 (0 marks):** No relevant content. | |
| **Indicative content:**  Structure:   * large molecule * polymer * helix/spiral * double/two chains * four different monomers * nucleotides * intermolecular forces   Importance:   * essential for living things * genetic instructions/genes * controls development/function * viruses.   This indicative content is not exhaustive, other creditworthy responses should be awarded marks as appropriate. | |