**Design & Technology (Product Design)**

**A-Level**

MARK SCHEME

**Mark /120**

**Q1)**

**PAR** – Planed all round

**BSI** – British standards institute

**HSE** – Health and safety executive

**PPE** – Personal protective equipment

**Q2a)**

* 15 x 80 x 9.21 = £11,052

**Q2b)**

* Half to 40 hours

**Q2c)**

* High set up cost
* Lower labour costs
* High unemployment/anger among employees
* Highly skilled technician jobs
* No human error
* Machinery is inflexible

\* List is not exhaustive

**Q3a)**

**A screenshot of a test

Description automatically generated**

**Q3b)**

**A white text with black text

Description automatically generated**

**Q3c)**

**A paper with text on it

Description automatically generated**

**Q4)**

* Strong (1) -> resist static forces (1) -> won’t break under loading from people (1)
* Durable (1) -> will last a long time (1) -> suitable for outdoor weather (1)
* Tough (1) -> can withstand impacts (1) -> won’t break if something hits it (1)
* Hard (1) -> won’t wear away (1) -> will last a long time outside (1)

**Q5)**

* Material standard might not be great (1) -> poor quality product (1)
* Hard to upcycle certain products

**Q6a)**

* Compression
* Tension
* Bending

**Q6b)**

**Q6c)**

**Q6d)**

**Q7)**

**Q14)**

* Automation -> explanation (2)
* Robotics -> explanation (2)
* Specialist buildings -> explanation (2)