**Design & Technology**

**Health and safety laws, regulations and impacts on the designing and making process**

**Materials required for questions**

* Pencil
* Rubber
* Calculator

**Instructions**

* Use black ink or ball-point pen
* Try answer all questions
* Use the space provided to answer questions
* Calculators can be used if necessary
* For the multiple choice questions, circle your answer

**Advice**

* Marks for each question are in brackets
* Read each question fully
* Try to answer every question
* Don’t spend too much time on one question

**Good luck!**

**Q1.** What does this warning symbol mean?

Icon

Description automatically generated

**A** Hazardous product

**B** Corrosive

**C** Dangerous for the environment

**Q2.** What does this warning symbol mean?

A picture containing icon

Description automatically generated

**A** Corrosive

**B** Flammable

**C** Toxic

**Q3.** Which symbol indicates a chemical that should be used in a fume cupboard?

Icon

Description automatically generated

**A**

A picture containing icon

Description automatically generated**B**

Icon

Description automatically generated

**C**

**Q4.** Which of these is NOT an example of personal protective equipment (PPE)?

**A** Goggles

**B** Clamps

**C** Chainmail gloves

**Q5.** Which of these is required by law to ensure safe use of tools, equipment and materials?

**A** Risk assessment

**B** COSHH report

**C** PAT testing

**Q6.** Which one of the following statements is true?

**A** Safety guards on workshop machinery

are not needed when an adult is present.

**B** Quality Control only occurs when the

production process is complete.

**C** COSHH regulations control the level of

exposure of workers to softwood dust.

**Q7.** Which one of the following statements is false?

**A** Manufacturers must follow COSHH

regulations

**B** COSHH stands for Control of substances

Harmful to health

**C** Safety sign regulations require employees

to display an appropriate safety sign

wherever a significant risk cannot be

avoided or reduced

**Q8**. What does the health and safety work act do (1974)? **(3 marks)**

**Q9.** Before any manufacturing processes are carried out a risk assessment must be completed.

Outline the five steps involved in a risk assessment. **(5 marks)**

1.

2.

3.

4.

5.

**Q10.** If **two** control measures, other than personal protective equipment (PPE), used during the pouring of a pewter sand casting in the school workshop **(2 marks)**

**Q11.** Explain the safe work practices necessary to protect workers when using solvent adhesives **(6 marks)**

**Answers**

**Q1. A  
Q2. C  
Q3. A  
Q4. B  
Q5. A  
Q6. C  
Q7. B**

**Q8.**

* Under this Act of parliament, employers are legally required to do all that is reasonably practicable to ensure the health, safety and welfare at work of employees
* This also applies to the health and safety of non-employees such as students and visitors to the school
* The following regulations are procedures to safeguard the risk of injury to people

**Q9.**

* Identify the hazards / risks (1)
* Identify the people at risk / who might be harmed. (1)
* Evaluate the risks / assess the seriousness of it / likelihood of it happening. (1)
* Decide / implement / check appropriate control measures / an example of a control measure Eg. guards, PPE, signage, training maintenance, etc. (1)
* Record /store the risk assessment (1)
* Set a review date / regularly review the risk assessment. (1)

**Q10.**

* Use of localised ventilation extract/hood. (1)
* Use of screens to separate user from molten metal. (1)
* Sand floor to stop rapid spread of pewter if aluminium spilled. (1)
* Specialist tools to lift crucible and pour pewter. (1)

**Q11.**

* Users should be aware of COSHH guidance that governs their use, storage and disposal. (1)
* Users must store the adhesive in a COSHH cupboard when not in use. (1)
* The adhesive may be irritant to skin so correct PPE should be worn e.g. gloves
* The adhesive may be a liquid so correct PPE such as goggles should be worn. (1)
* Vapours that can be released can be highly flammable so no naked flames should be present when using the adhesive. (1)
* Users must ensure that instructions have been read and guidance is followed. (1)
* Vapours can be released therefore the adhesive should be used in well-ventilated areas. (1)
* Users must identify and understand the COSHH symbol present which will both govern its use and disposal. (1)