

## Design & Technology

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

### Materials required for questions

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- Pencil
- Rubber
- Calculator

### Instructions

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- 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

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- 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?



- A** Hazardous product
- B** Corrosive
- C** Dangerous for the environment

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



- A** Corrosive
- B** Flammable
- C** Toxic

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

**A**



**B**



**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)**

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**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)**

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**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**)

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

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## 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)