1. **WHAT IS A PRINTED CIRCUIT BOARD (PCB)?**
   WHAT IS ITS PURPOSE? Include an image of a PCB.

2. **CIRCUIT DESIGNS ARE DRAWN ON ‘ELECTRONICS / CIRCUIT AND PCB SIMULATION SOFTWARE.’
   WHAT ARE THE ADVANTAGES OF USING THIS TYPE OF SOFTWARE? Include sketches and notes.

3. **DESCRIBE THE STAGES INVOLVED IN: PREPARING A SOLDERING IRON, PCB AND COMPONENTS, READY FOR SOLDERING.** Include sketches and notes.

4. **WHAT IS SOLDER? DESCRIBE AND SKETCH THE SOLDERING PROCESS.** Include notes and labels.

5. **DESCRIBE AND SKETCH (or paste an image) OF A GOOD AND POORLY SOLDERED JOINT.**

6. **HOW IS SOLDERING CARRIED OUT IN INDUSTRY, FOR MASS PRODUCTION?** Include notes and sketches.

7. **PCBs CAN BE MANUFACTURED BY A CNC MACHINE.** DESCRIBE THIS PROCESS. Include an image of a CNC machine capable of this work.

8. **INDUSTRIAL WASTE FROM THE MANUFACTURE OF PCBs, IS DANGEROUS.** EXPLAIN THE PROBLEM. Paste warning symbols that are found on PCB chemicals.

9. **CIRCUIT DESIGNS / LAYOUTS CAN BE TESTED USING ‘BREADBOARDS’. WHAT ARE THESE?** Include an image of a breadboard, set out with components.

10. **EXPLAIN / DESCRIBE, THE DESIGN AND MANUFACTURE OF A PRINTED CIRCUIT BOARD.** Include sketches and notes. Click on the four cranes for helpful links.

**EXTENSION WORK**

A

B

C

D