

SECONDARY SCHOOL ANNUAL EXAMINATIONS 2004
Educational Assessment Unit – Education Division

FORM 5

TECHNOLOGY EDUCATION

Time: 2 hours

Name: _____

Class: _____

Answer all questions

- 1.** Write the following stages of the design process in order.

Making - Evaluation – Situation - Brief - Planning - Investigation.

- | | |
|----------|----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |
| 5. _____ | 6. _____ |

6 Marks

- 2.** Plastics are classified into either THERMOSETTING or THERMOPLASTICS. Explain the difference.

4 Marks

- 3.** Classify these four types of wood either as **natural** or **manufactured**

Chipboard – Red deal – Fibreboard – Mahogany.

NATURAL:	(a) _____	(b) _____
MANUFACTURED:	(a) _____	(b) _____

8 Marks

4. Name three methods of joining metals.

(a) _____

(b) _____

(c) _____

3 Marks

5. Name three methods of joining wood.

(a) _____

(b) _____

(c) _____

3 Marks

6. Metals are classified into FERROUS or NON-FERROUS.

Mild steel, brass, copper and cast iron are all types of metals. Classify them in the table below.

FERROUS: (a) _____ (b) _____

NON-FERROUS: (a) _____ (b) _____

8 Marks

7. Structures are classified into SOLID, FRAME or SHELL. Classify these structures into their proper group.

Box – crane – coin – helmet – bicycle – iron bar

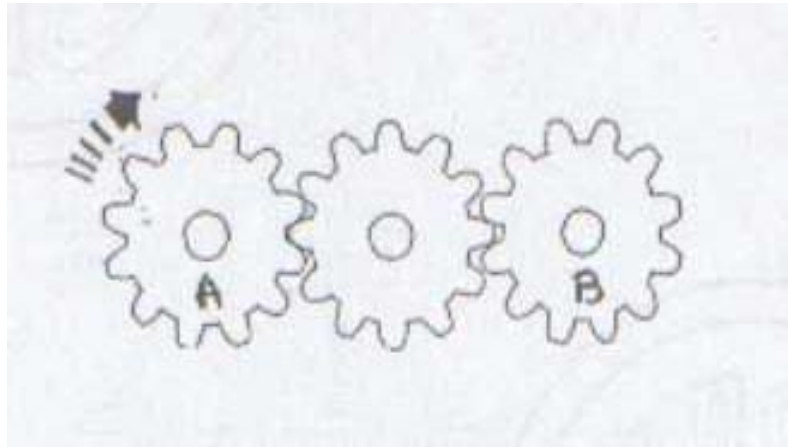
SOLID _____ _____

FRAME _____ _____

SHELL _____ _____

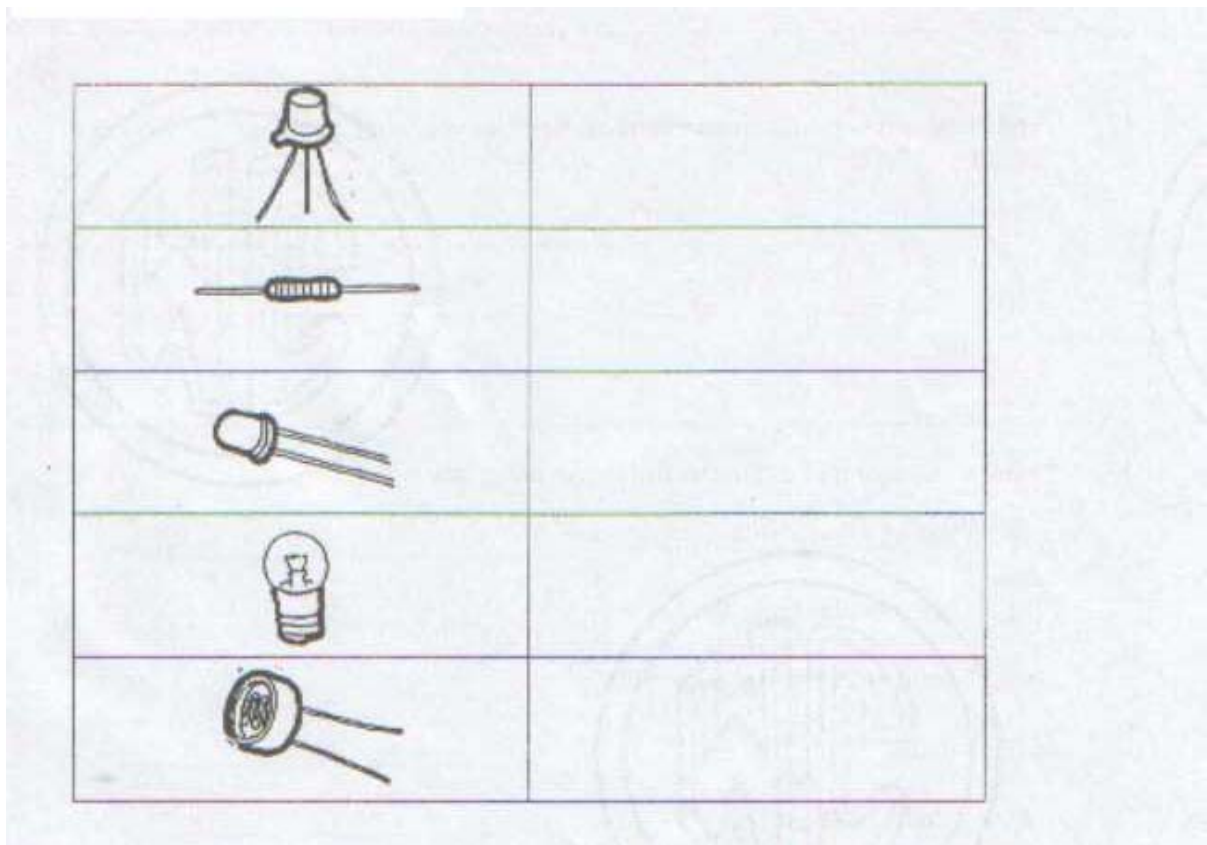
6 Marks

8. Indicate with an arrow the direction in which gear marked **B** will turn when gear marked **A** is turning clockwise.




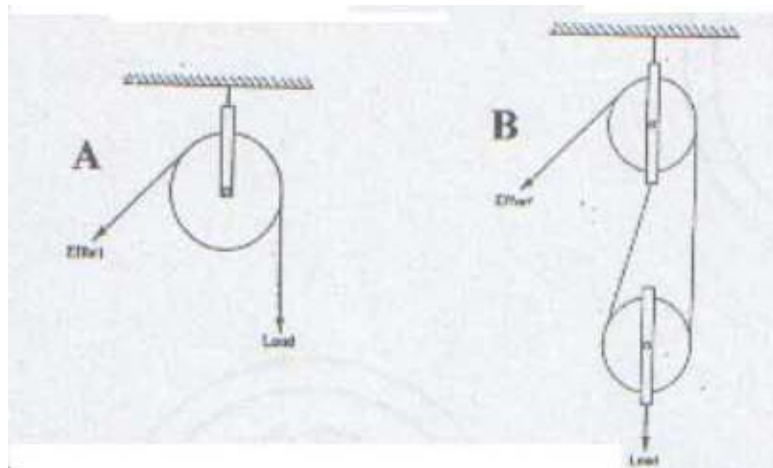
2 Marks

9. Name the components shown:



10 Marks

10. Mark with a  which of these two loads require the least effort to lift.



4 Marks

11. State two safety precautions that must be observed when using an arc welding set.

- 1) _____
- 2) _____

2 Marks

12. State two safety precautions that must be observed when using a woodworker's chisel.

- (1) _____
- (2) _____

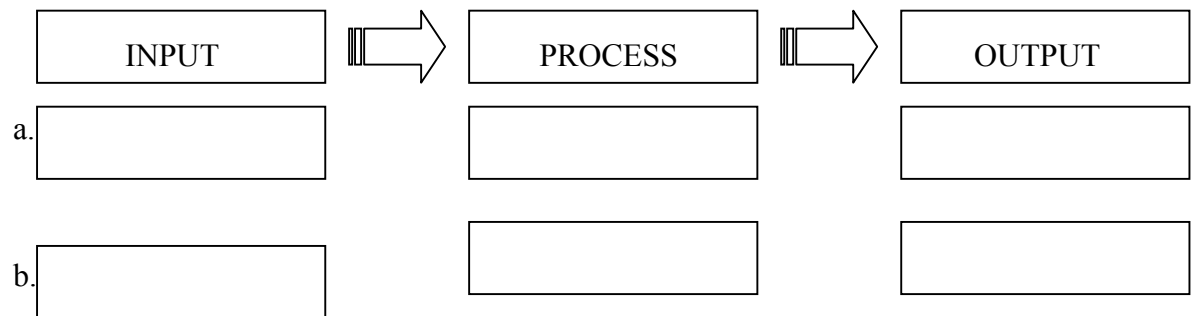
2 Marks

13. State a suitable tool to cut the following materials.

- (a) wooden strip 25mm thick _____
- (b) sheet-metal 1mm thick _____
- (c) mild steel flat bar 10mm thick _____
- (d) fabric _____
- (e) thick cardboard _____
- (f) electrical wire 0.5mm diameter _____

12 Marks






14. Place each of the following words under the correct heading of this block diagram:
- Catch moves, padlock opens, key turned.
 - Light on, press switch, switch contact changes.



6 Marks

15. Complete the table by :

- Naming each tool.
- Describe its use.

TOOLS /COMPONENTS / EQUIPMENT	NAME	USE
	PINCERS	PULLING NAILS FROM WOOD
		
		
		
		

4 Marks

16. Write whether each of the following statements is true or false.

		True or False
1	The earth wire in a 3-pin plug is yellow and green in colour.	
2	An LED needs a resistor to protect it from burning out.	
3	An orbital sander is used to rough up surfaces of wood.	
4	A resistor allows current to flow easily.	
5	Aluminium is an alloy of tin and lead.	
6	In a 'Parallel' circuit, all the bulbs go off when a bulb is removed.	
7	Pure metals are combined to form alloys to improve their properties.	
8	Mild steel can be filed down with a rasp.	
9	The Voltage in a 'Series' circuit is divided between the bulbs.	
10	All hand files must have a handle during use.	
11	An LED has two leads of the same length.	
12	A working drawing should show all the details to carry out work.	
13	A scale of 1:5 on a drawing means double size.	
14	Plastics are good conductors of electricity.	
15	An Isometric drawing shows an object in 3-D.	
16	Mild steel can be cut with a tenon saw.	
17	All metals used in industry have some iron in them.	
18	Safety goggles must be worn when working on a drilling machine.	
19	Using electrical equipment with wet hands is dangerous.	
20	In a 13amp plug the fuse is connected to the live pole.	

20 Marks