

# SECONDARY SCHOOL ANNUAL EXAMINATIONS 2004

Educational Assessment Unit – Education Division

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**FORMS 1 & 2**

**DESIGN AND TECHNOLOGY**

**TIME: 1h 30min**

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**Name:** \_\_\_\_\_

**Class:** \_\_\_\_\_

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**Answer all questions from section A, and any other 3 questions from section B**

**Section A:**

## **DESIGN PROCESS**

1. The following is a list of Design and Technology realisations.

- A toy for a six year old child.
- A package for a snack to be sold in a school canteen.
- A night lamp for a child's room.

Give **three** design requirements you would include in a specification for a realisation chosen from the above list.

Name of realisation chosen: \_\_\_\_\_

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

(iii) \_\_\_\_\_

**(10 marks)**

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2. Give **three** reasons why the making of a model helps to develop better a chosen idea.

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

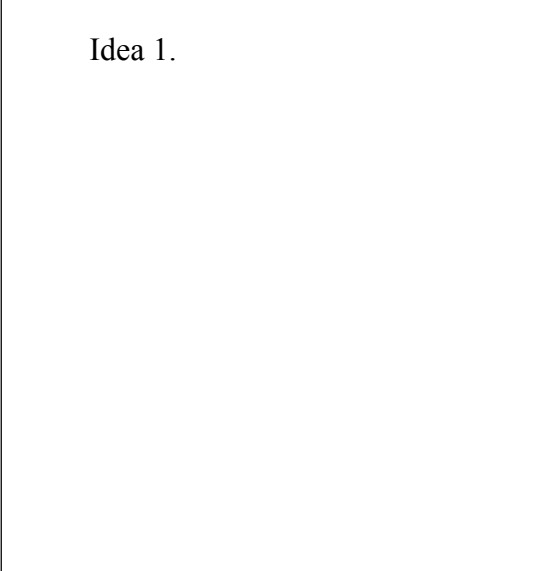
(iii) \_\_\_\_\_

**(10 marks)**

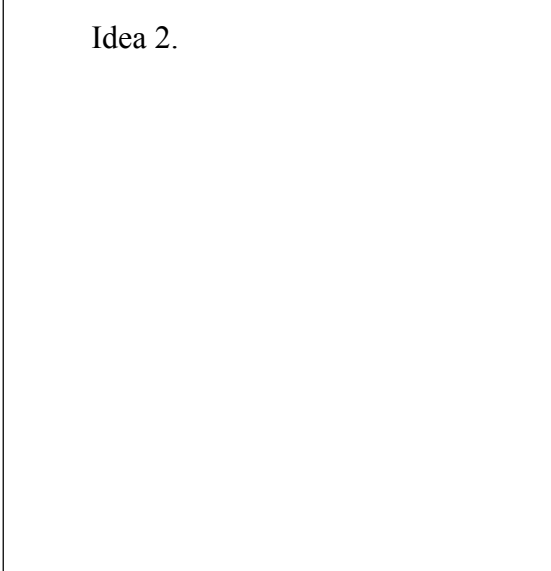
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3. Sketch **two** ideas for the realisation you have chosen.

Idea 1.



Idea 2.



**(10 marks)**

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4. Give **three** reasons why an evaluation is made at the end of a realisation.

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

(iii) \_\_\_\_\_

**(10 marks)**

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**Section B (cont):**

**ELECTRONICS**

1. (a) State **two** safety rules that must be followed when working with electricity.

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

- (b) State four materials that are conductors.

(i) \_\_\_\_\_ (ii) \_\_\_\_\_

(iii) \_\_\_\_\_ (iv) \_\_\_\_\_

- (c) Why are conductors used in electrical projects?

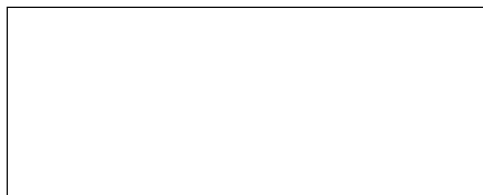
\_\_\_\_\_

- (d) Draw a circuit diagram to show how you would connect a bulb, a switch and a battery to form a complete circuit.



**(20 marks)**

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2. (a) Draw the symbol for a resistor.



(b) What is the function of a resistor in an electronic circuit?

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(c) What unit is used to measure the value of a resistor?

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(d) Give a method of how the value of a resistor is calculated.

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**(20 marks)**

3. (a) What does the abbreviation LED stand for?

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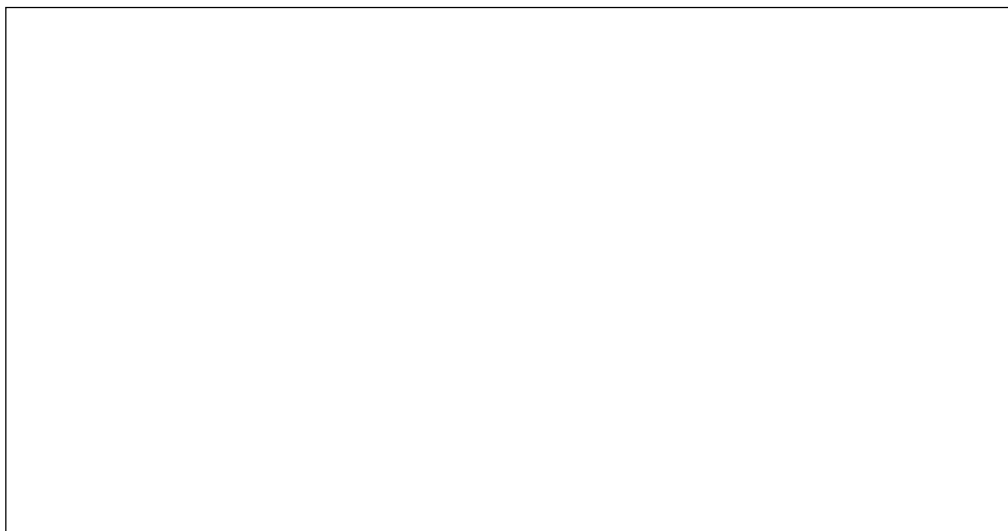
(b) What are the two legs of an LED called?

(i) \_\_\_\_\_ (ii) \_\_\_\_\_

(c) What other electronic component must be connected to an LED to prevent it from burning out?

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(d) Draw a circuit diagram to show how these components should be connected together so that the LED lights up.



**(20 marks)**

**Section B (cont):**

**FOOD**

1. (a) Give the **name** of the kitchen equipment shown in the following pictures.



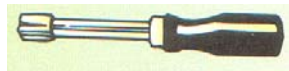
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- (b) State the use of the following kitchen equipment.

Colander \_\_\_\_\_

Sieve \_\_\_\_\_

Fish slice \_\_\_\_\_

Corer \_\_\_\_\_

- (c) State **two** safety precautions that must be observed when using knives.

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

- (d) Bringing out hot dishes from an oven can be dangerous.  
What would you use to prevent burning your hands?

\_\_\_\_\_

**(20 marks)**

2. (a) The two main food groups are **Animal** and **Plant**.  
List these food items under the proper group.

Cabbage, Eggs, Cheese, Potato, Ham, Milk, Apple, Banana, Bacon, Tomatoes.

ANIMAL	PLANT

- (b) Which foods from the list given below are considered most healthy?  
Mark the correct answers with a ✓.

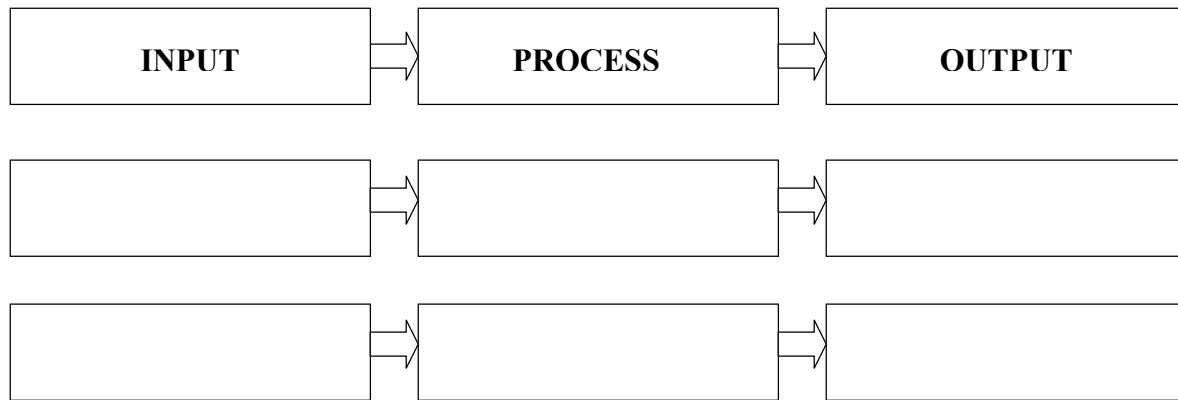
Bran flakes	<input type="checkbox"/>	Apples	<input type="checkbox"/>	Soft drinks	<input type="checkbox"/>
Beer	<input type="checkbox"/>	Milk	<input type="checkbox"/>	Take-away burger	<input type="checkbox"/>

- (c) Five stages of making a fresh fruit salad are listed below.  
List them in the correct order from 1 to 5.

- Cut fruits in different shapes.
- Thoroughly wash all fruits.
- Keep salad in refrigerator.
- Collect all tools and ingredients.
- Put cut fruits in salad bowl.


(d) Place each of the following under the correct heading of this block diagram.

- (i) Soup - Heat - Chopped vegetables
- (ii) Fruit juice - Liquidising - Mixed fruits



(20 marks)

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3. Food processing can be classified as either “Primary” or “Secondary”.

(a) What is meant by “Primary Processing”?

\_\_\_\_\_

(b) Give two examples of “Primary Processed” foods.

(i) \_\_\_\_\_ (ii) \_\_\_\_\_

(c) What is meant by “Secondary Processing”?

\_\_\_\_\_

(d) Give two examples of “Secondary Processed” foods.

(i) \_\_\_\_\_ (ii) \_\_\_\_\_

(20 marks)

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