DIRECTORATE FOR QUALITY AND STANDARDS IN EDUCATION
Department for Curriculum Management and eLearning
Educational Assessment Unit
Annual Examinations for Secondary Schools 2010

Tra

FORMS 1 & 2 **DESIGN & TECHNOLOGY** **TIME: 2 hours**

Name: _____ Class: _____ Set: _____

----------Note for students of Form 1: ----------

You are required to answer all questions in sections A, B and C only.

----------Note for students of Form 2: ----------

You are required to answer all questions in sections A and any other two sections.

FOR TEACHERS' USE ONLY DISTRIBUTION OF MARKS

	Areas corrected					Total for Written Exam.	**FINAL MARK**
	D	**RM**	**E**	**F**	**T**		
Max. Marks	50	25	25	25	25	100	**%**
Student's mark							

Enter student's mark obtained in the areas of study taken in the above table.

D for Design, **RM** for Resistant Materials, **E** for Electronics, **T** for Textiles technology and **F** for Food technology

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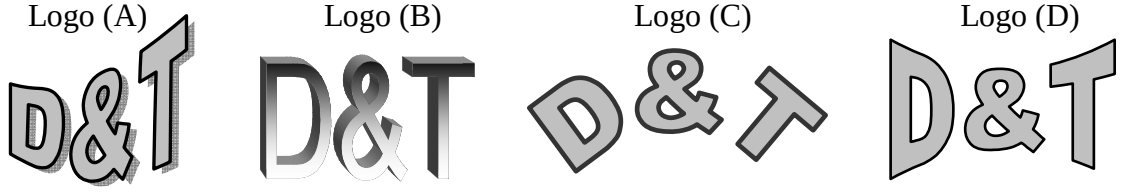
SECTION A: **DESIGN**

1. Which TWO logos are drawn in **3-D**?

Logo (A) Logo (B) Logo (C) Logo (D)



Answer: Logo _____ and Logo _____

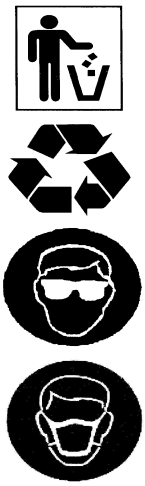
3 marks x 2 = 6 marks

2. Give TWO methods by which we can communicate our ideas for a project to other persons.

_____ and _____

2 marks x 2 = 4 marks

3. Give the meaning of the pictograms shown below.



(i) _____

(ii) _____

(iii) _____

(iv) _____

2 marks x 4 = 8 marks

4. Use the following words to fill in the missing stages of the Design Process.

- **Chosen Idea**
- **Specification**
- **Development**
- **Design Brief**

DESIGN PROCESS					
1	Situation	**2**		**3**	Research
4		**5**	Initial Ideas	**6**	
7		**8**	Making	**9**	Testing and Evaluation

2 marks x 4 = 8 marks

5. State TWO sources, from where you can get information when doing research for a pr

_____ and _____

2 marks x 2 = 4 marks

6. Underline the keywords in the following design brief.

Design Brief:
DESIGN AND MAKE A PLASTIC CASE TO PROTECT A MOBILE PHONE WHEN GOING ON A BEACH.

1 mark x 3 = 3 marks

7. Mention TWO factors that a mobile phone needs to be protected from, when you are on the beach.

_____

_____

3 marks x 2 = 6 marks

8. Give TWO reasons why the above design brief is asking for the mobile phone case to be made out of plastic.

_____

_____

3 marks x 2 = 6 marks

9. Use the given words to fill in correctly, the blank spaces of the following statements.

- **research**
- **environment**
- **solve**
- **ideas**
- **safety**

a) In a design process, the situation presents a problem which we will try to _____.

b) One way of doing _____ is by using the internet.

c) Good designers consider the effects on the _____ when designing a product.

d) In D&T laboratories we should obey _____ signs and instructions.

e) After research we look for _____ to see how a problem can be solved.

1 mark x 5 = 5 marks

---------- END OF SECTION 'A' ----------

SECTION B: **RESISTANT MATERIALS**

10. Name TWO types of manufactured (man-made) boards.

_____ and _____

2 marks x 2 = 4 marks

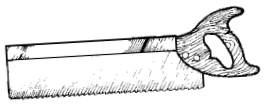
11. List TWO safety precautions that should be observed when using a bench drill.

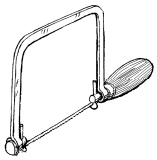
_____

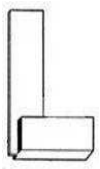
_____

2 marks x 2 = 4 marks

12. Give the name of each tool shown below.

a)  _____

b)  _____

c)  _____

d)  _____

1 mark x 4 = 4 marks

13. Name TWO types of finish used on wood.

_____ and _____

2 marks x 2 = 4 marks

14. Finish off the following statements.

An **alloy** is a _____ of metals to form a new metal.

One type of **non-ferrous** metal is _____.

Brass is made up by a mixture of copper and _____.

Plastics that are formed **only once** are called _____.

Plastics like Acrylic, Polystyrene and PET are all **types** of _____.

1 mark x 5 = 5 marks

15. Mention ONE type of glue used to join wood.

_____ **2**

16. What type of glue is used to join PVC?

_____ **2 marks**

---------- END OF SECTION 'B' ----------

SECTION C: **ELECTRONICS**

17. State the tool required for each of the following tasks.

Job description	Tool required
Cutting wire terminals to the required length	
Stripping end of wires for soldering	

2 marks x 2 = 4 marks

18. List TWO safety precautions that should be taken when soldering electronic components.

_____

_____

2 marks x 2 = 4 marks

19. a) Name TWO materials that are good electrical **conductors**.

_____ and _____

1 mark x 2 = 2 marks

b) Name TWO materials that are good electrical **insulators**.

_____ and _____

1 mark x 2 = 2 marks

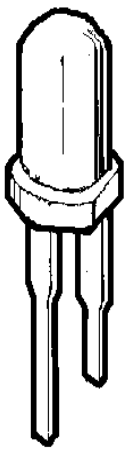
20. Draw the symbol of each of the following components.

Component	Symbol
LED	
Fixed Resistor	

1 mark x 2 = 2 marks

21. The diagram on the right shows an LED.

Mark on the diagram which terminal is positive and which terminal is negative.



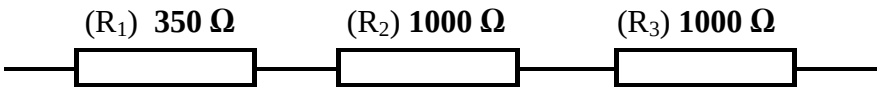
1 mark x 2 = 2 marks

22. Draw the symbol of the following switches.

Switch	Symbol
Single pole single throw switch	
Push to make switch	

1 mark x 2 = 2 marks

23. Three resistors are connected in series as shown below. Calculate the total resistance in ohms.



Total Resistance = _____ ohms **2 marks**

24. Draw the circuit diagram for two lamps connected in series to a 6 volt battery.
Use a ruler for drawing your lines straight.

5 marks

---------- END OF SECTION 'C' ----------

SECTION D: **FOOD**

25. For which foods are the following chopping boards used?

a) Green chopping board: _____

b) Red chopping board: _____

c) White chopping board: _____

d) Blue chopping board: _____

1 mark x 4 = 4 marks

26. List the FOUR main packaging materials used for packing food.

_____ _____

_____ _____

1 mark x 4 = 4 marks

27. Place the following system elements in their correct place.

- **INPUT**
- **OUTPUT**
- **PROCESS**

	⇨		⇨	
Ingredients		Cooking		Finished product

1 mark x 3 = 3 marks

28. Draw arrows to match the following foods to their main nutrient.

FAT

CARBOHYDRATES

PROTEIN

MINERALS

VITAMINS

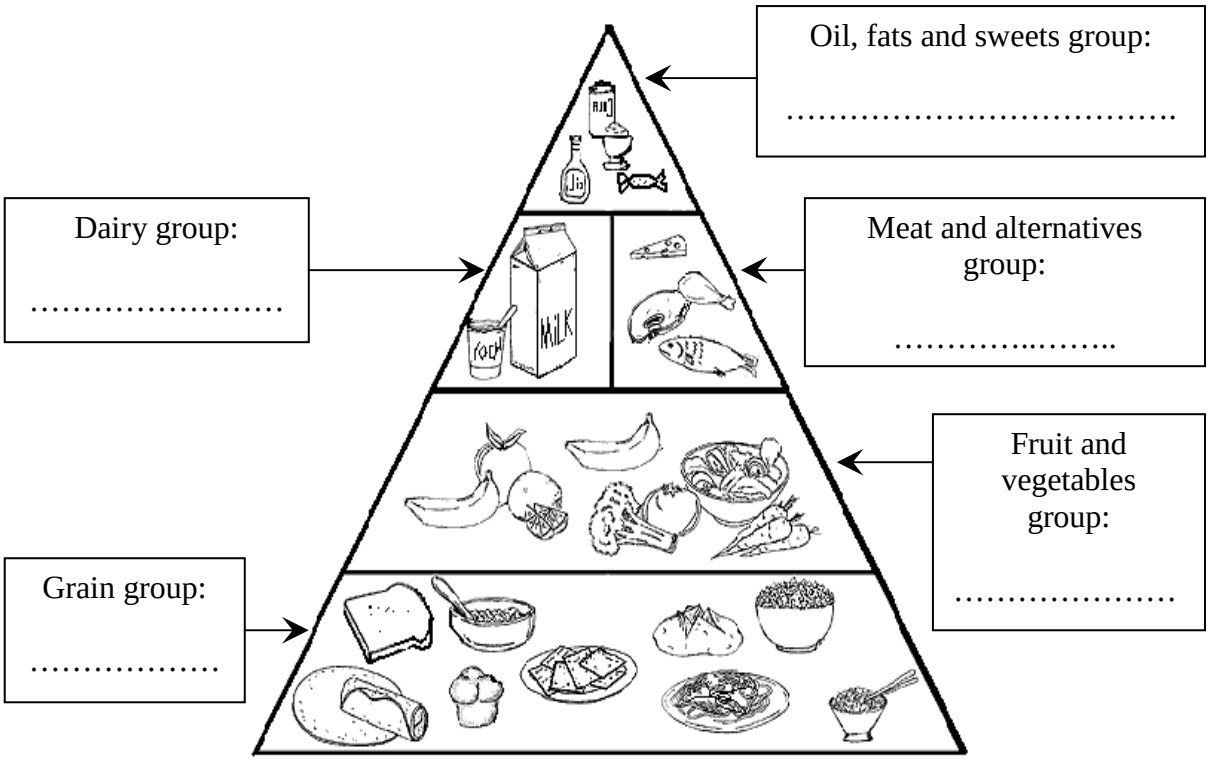
1 mark x 5 = 5 marks

29. Fill in the table below with ONE appropriate sensory descriptor for each food charac

FOOD CHARACTERISTICS			
APPEARANCE	TASTE	TEXTURE	SMELL

1 mark x 4 = 4 marks

30. How many daily servings should we eat from each food group?



1 mark x 5 = 5 marks

---------- END OF SECTION 'D' ----------

SECTION E: **TEXTILES**

31. Here is a list of several types of fibre used in textiles.

- **Linen** - **Wool** - **Polyester** - **Silk** - **Cotton** - **Nylon**

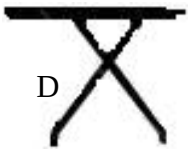
a) Which fibres are derived from a plant source? _____

b) Which fibres are derived from an animal source? _____

c) Which fibres are synthetic? _____

1 mark x 6 = 6 marks

32. Select THREE of the following pictures of tools or equipment used in a textiles workshop and state what they are used for.

A  B  C  D  E 

Picture ____: Use: _____

Picture ____: Use: _____

Picture ____: Use: _____

1 mark x 3 = 3 marks

33. a) Name TWO components normally used as fasteners on textile products.

_____ and _____

2 marks x 2 = 4 marks

b) Give TWO examples of a textiles product that is manufactured by the **one-off** production method.

_____

_____

2 marks x 2 = 4 marks

34. Give TWO examples of a textile product that is manufactured by the **Batch** production

_____

_____

2 marks x 2 = 4 marks

35. List TWO properties that cotton and linen fabrics have in common.

_____

_____

2 marks x 2 = 4 marks

---------- END OF SECTION 'E' ----------