

Candidate Name	Centre Number	Candidate Number
		4



Entry Level

720/01

DESIGN AND TECHNOLOGY

P.M. WEDNESDAY, 12 March 2008

1 hour

**Examiner
only**

Task 1 (Designing) (32)	
Task 2 (Making) (48)	
Total (80)	

ADDITIONAL MATERIALS

In addition to this examination paper, you will need:

- coloured pens/pencils.

INSTRUCTIONS TO CANDIDATES

Write your name, centre number and candidate number in the spaces at the top of this page.

Answer TASK 1.

Answer only ONE (1) of the TASK 2 focus area questions.

If you have difficulty in reading a question, put up your hand and the teacher-in-charge will read it to you.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.

TASK 1: DESIGNING

1. (a) The drawings below show everyday items you may have come across.

Look carefully at the drawings and **match** them up with the materials in the list below.

Write your answer in the box. You could use the materials more than **once**. [10]

















Tyre





WORD LIST

WOOD

WOOL

RUBBER

STAINLESS STEEL

PAPER

CARD

METAL

GLASS

PLASTIC

COTTON

(b) **Look** at the products below and **write** down **two** (2) reasons why these materials are suitable.

(i)



This mobile phone could be made from a type of

.....

This is a suitable material because:

Reason 1:

.....

Reason 2:

.....

[2]

(ii)



This jumper could be made from a type of

.....

This is a suitable material because:

Reason 1:

.....

Reason 2:

.....

[2]

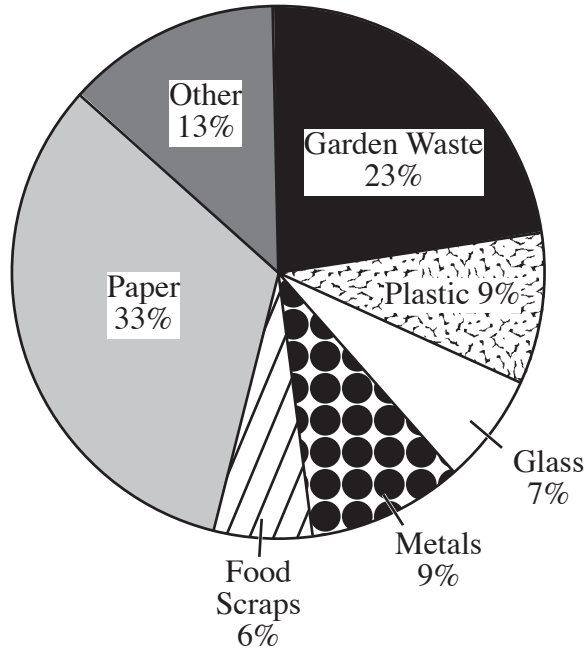
(iii) Name **two** (2) other materials which are suitable for recycling:

1.

2.

[2]

2. Look at the chart below. It shows you the percentage (%) of different materials we recycle.



- (a) What material do we recycle more than anything else?

.....
[1]

- (b) What percentage (%) of glass is recycled?

.....
[1]

- (c) Which material makes up the smallest percentage (%)?

.....
[1]

- (d) What is the total percentage (%) of glass and plastics recycled?

.....
[1]

- (e) Name the type of chart shown.

.....
[1]

- (f) What other type of chart/graph could you use to show this information?

.....
[1]

3. Design a board game using the grid below on the theme of **RECYCLING**.

Your game should be;

- fun to play
- clear sketches with instructions
- colourful.

START →		

[10]

Answer only ONE (1) of the TASK 2 focus area questions.

TASK 2: MAKING

In this section of the paper, you should answer only one (1) of these questions:-

If you have been studying:-

* **Food Technology** go to pages 7 to 10.

* **Graphic Products** go to pages 11 to 14.

* **Resistant Materials Technology** go to pages 15 to 18.

* **Systems and Control Technology** go to pages 19 to 22.

* **Textiles Technology** go to pages 23 to 26.

Put a tick (✓) in the box next to the ONE (1) area you are going to do.

FOOD TECHNOLOGY

4. (a) **Name and sketch/draw two (2) pieces of equipment or tools that you would use to make this quick pizza.**



Name of tool/equipment	Name of tool/equipment
Sketch/drawing	Sketch/drawing

[6]

(b) The stages for making the **pizza** have been jumbled up in each section.

Put these sentences in the right order by writing a number in each box.

The **first** [1] stage of each section has been done for you.

Section 1: Preparation List	
• Collect equipment and ingredients.	
• Wash hands, tie hair back and put on an apron.	1
• Weigh out ingredients.	
• Turn oven onto 200°C or Gas Mark 7.	

[6]

Section 2: Making List	
• Add the fat to the flour and rub in until the mixture resembles fine breadcrumbs.	
• Lightly knead the dough. Shape into a 20cm round and place onto a greased baking tray.	
• Sieve the flour into a bowl with the seasoning.	1
• Add small amounts of milk to the breadcrumbs mixture and mix thoroughly.	

[6]

Section 3: Finishing / Presentation List	
• Cover the pizza base with tomato puree and sprinkle with cheese.	1
• Wash up and clean work surfaces. Put equipment away.	
• Cover with ham, pineapple and cook for 20-25 minutes.	
• Remove pizza from the oven using oven gloves. Place on cooling rack.	

[6]

(c) From the **Section 1: Preparation List** (page 8), pick **one** (1) instruction and **sketch/draw** it in the box below.

Do the same for **Section 2: Making List**.

Preparation stage number	Making stage number

Fill in the number of **each** stage you have sketched/drawn. [8]

Evaluation

(d) (i) **List two** (2) good things about the recipe for the quick pizza.

(I)

..... [2]

(II)

..... [2]

(ii) Think about the **ingredients** in the **recipe** and the **design** of the quick pizza.

Give two (2) ways you could improve the recipe/design (make them better).

(I)

..... [2]

(II)

..... [2]

(iii) **Sketch/draw one (1) of your ideas for improvement in the box below. Label your sketch/drawing.**

[4]

(iv) For what occasion would this pizza be suitable? Why?

It would be suitable for

..... [2]

Because

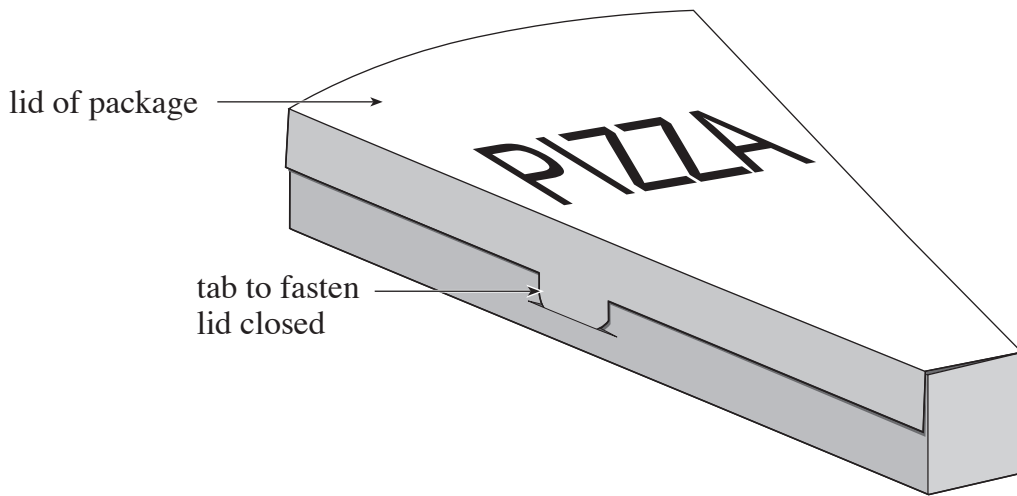
..... [2]

END OF FOOD TECHNOLOGY SECTION

GRAPHIC PRODUCTS

4. (a) The Graphic Products group has been asked to design and make a card package, suitable to hold a pizza slice.

Name and sketch/draw two (2) pieces of equipment or tools that you would use to make this package from cardboard.



Name of tool/equipment	Name of tool/equipment
Sketch/drawing	Sketch/drawing

[6]

(b) The stages for making the **package** have been jumbled up in each section.

Put these sentences in the right order by writing a number in each box.

The **first** [1] stage in each section has been done for you.

Section 1: Preparation List	
• Design the graphic images for the package and the written information.	
• Design the package net on a computer.	1
• Collect materials, tools and equipment.	
• Scale the net drawing to the right size.	

[6]

Section 2: Making List	
• Cut out the net from the printed card.	
• Fold along the scored lines to make the 3D package.	
• Print the graphic images on to the card.	1
• Score the folds with the back of a knife on the inside of the package.	

[6]

Section 3: Finishing / Presentation List	
• Glue the sides to secure the box shape.	1
• Attach a price tag and fold lid to close the package.	
• Cut slot for the lid tab.	
• Check to see that a slice of pizza fits in the package made.	

[6]

(c) From the **Section 1: Preparation List** (page 12), pick **one** (1) instruction and **sketch/draw** it in the box below.

Do the same for **Section 2: Making List**.

Preparation stage number	Making stage number

Fill in the number of **each** stage you have sketched/drawn.

[8]

Evaluation

(d) (i) **List two** (2) good things about the design of this package.

(I)

.....

[2]

(II)

.....

[2]

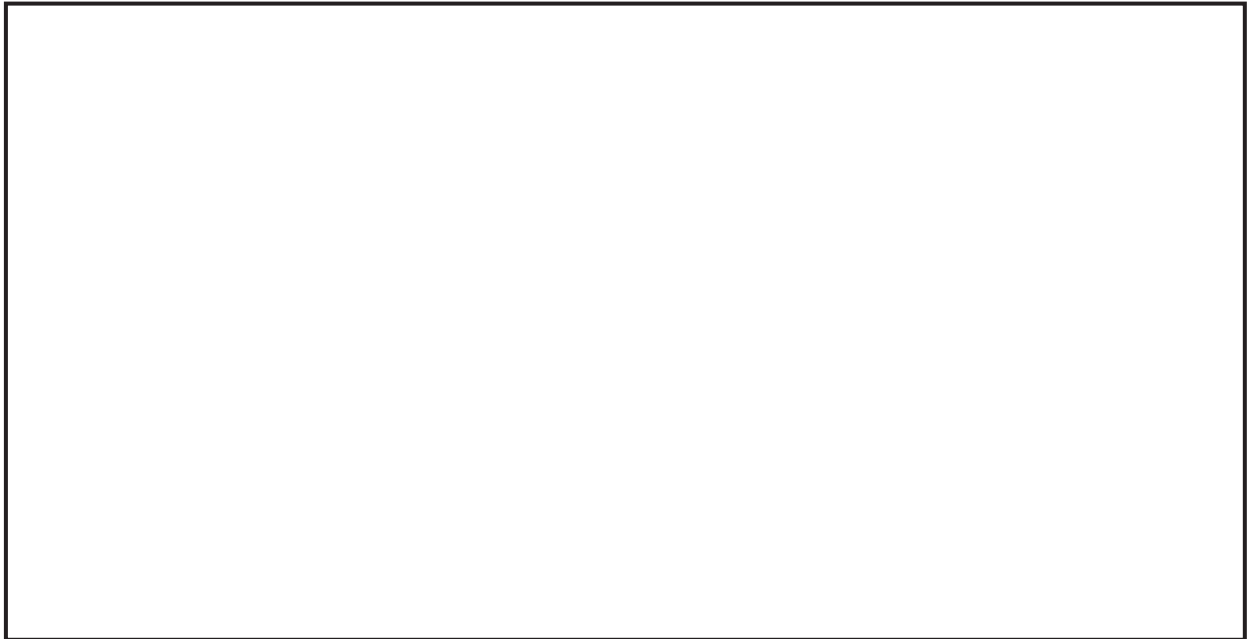
(ii) Think about the **design** of the package.

Give two (2) ways you could improve the design (make it better).

(I)
..... [2]

(II)
..... [2]

(iii) **Sketch/draw one (1) of your ideas for improvement in the box below. Label your sketch/drawing.**



[4]

(iv) What **other** purpose could the package be used for? Why?

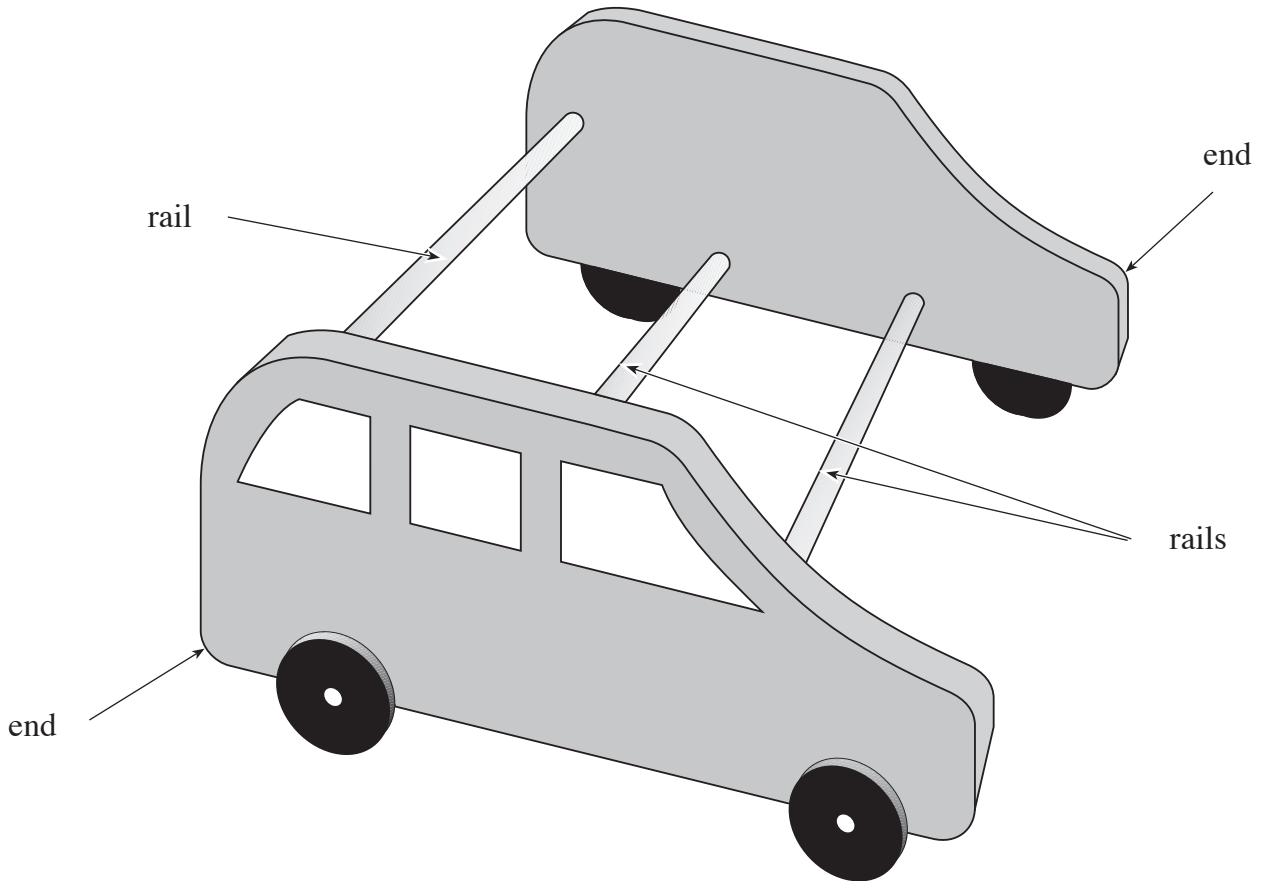
It could be used for
..... [2]

Because
..... [2]

END OF GRAPHIC PRODUCTS SECTION

RESISTANT MATERIALS TECHNOLOGY

4. (a) Name and sketch/draw two (2) tools or pieces of equipment that you would use to make this wooden DVD rack.



Name of tool/equipment	Name of tool/equipment
Sketch/drawing	Sketch/drawing

[6]

- (b) The stages for making the **wooden DVD rack** have been jumbled up in each section.

Put these sentences in the right order by writing a number in each box.

The **first** [1] stage of each section has been done for you.

Section 1: Preparation List	
• Cut out the materials for ends, rails and wheels.	
• Collect all tools/equipment and materials.	1
• Measure and draw in joints for the rails.	
• Measure the ends, rails, wheels and windows.	

[6]

Section 2: Making List	
• Saw and trim the ends to shape.	
• Fix end rails together and clamp.	
• Measure and draw shape of the ends.	1
• Mark the position of the rails and drill holes.	

[6]

Section 3: Finishing / Presentation List	
• Glue rails to the ends and secure with clamps.	1
• Finish with wax or varnish.	
• Use glass paper to smooth edges.	
• Glue wheels and windows.	

[6]

(c) From the **Section 1: Preparation List** (page 16), pick **one** (1) instruction and **sketch/draw** it in the box below.

Do the same for **Section 2: Making List**.

Preparation stage number	Making stage number

Fill in the number of **each** stage you have sketched.

[8]

Evaluation

(d) (i) List **two** (2) good things about this wooden rack.

(I)

..... [2]

(II)

..... [2]

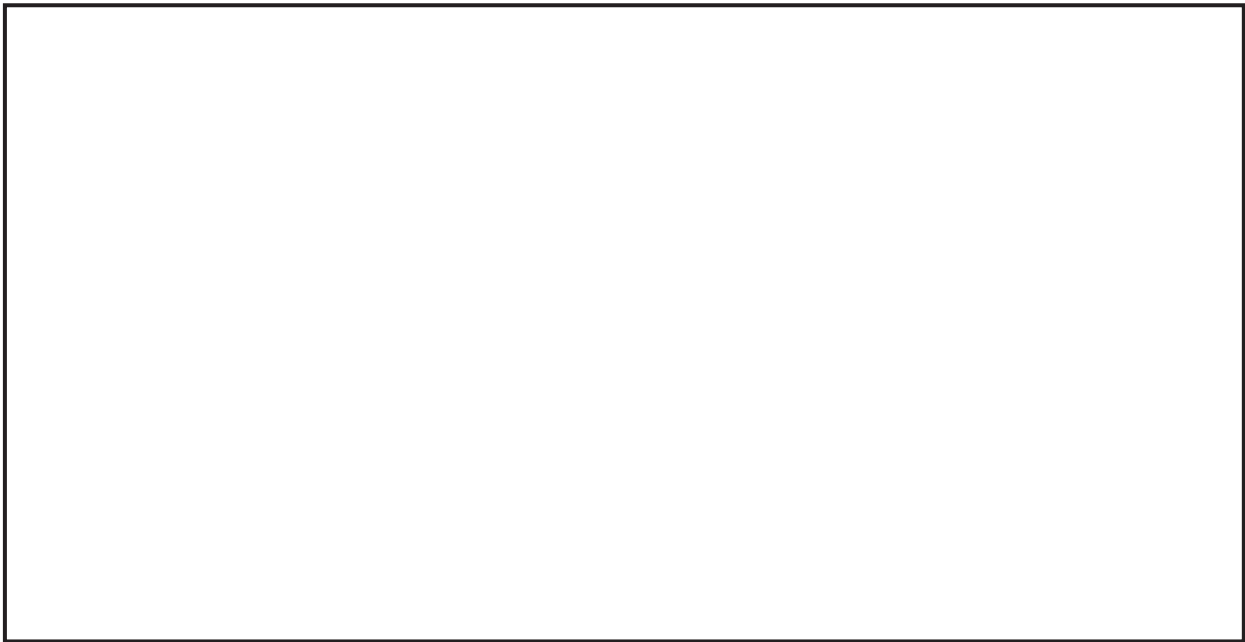
(ii) Think about the **design** of the wooden DVD rack.

Give **two** (2) ways you could **improve** it (make it better).

(I)
..... [2]

(II)
..... [2]

(iii) **Sketch/draw one** (1) of your ideas for **improvement** in the box below.
Label your sketch/drawing.



[4]

(iv) For what **other** use is this wooden DVD rack suitable? Why?

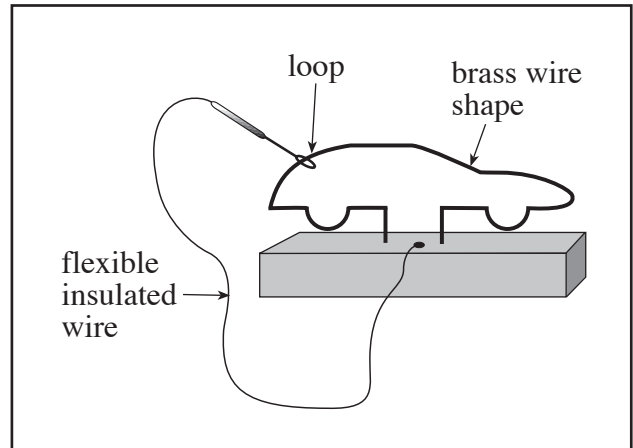
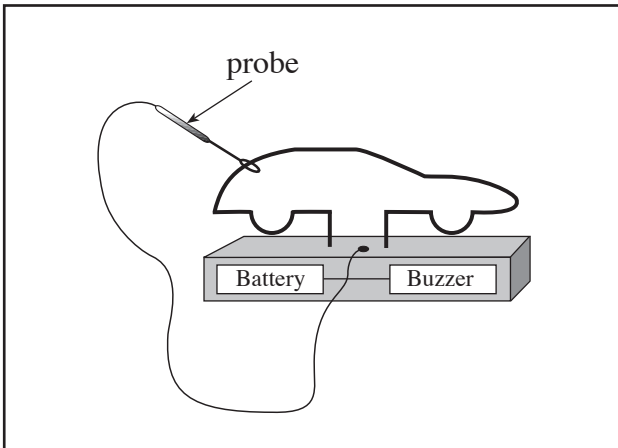
The **other** use could be
..... [2]

Because
..... [2]

END OF RESISTANT MATERIALS TECHNOLOGY SECTION

SYSTEMS AND CONTROL TECHNOLOGY

4. (a) **Name and sketch/draw two (2) pieces of equipment or tools** that you would use to make this steady hand game.



Name of tool/equipment	Name of tool/equipment
Sketch/drawing	Sketch/drawing

[6]

(b) The stages for making the **steady hand game** have been jumbled up in each section.

Put these sentences in the right order by writing a number in each box.

The **first** [1] stage of each section has been done for you.

Section 1: Preparation List	
• Mark the positions of the holes in the box.	
• Collect tools/equipment and materials needed.	1
• Drill holes in the box for the ends of the flexible loop and fixed wire shape.	
• Draw a full size shape of the brass wire and the loop end of the probe on a piece of paper.	

[6]

Section 2: Making List	
• Strip off the insulation from one end of the wire and bend into a loop.	
• Place the wire shape in position and glue the ends to the holes in the top of the box.	
• Glue and pin the top and sides of the box.	1
• Bend the brass wire into shape, pass one end through the loop.	

[6]

Section 3: Finishing / Presentation List	
• Join/solder all electrical parts together and test.	1
• Screw on the bottom of the box.	
• Stick the battery and the buzzer into the box.	
• Clip on the battery.	

[6]

(c) From the **Section 1: Preparation List** (page 20), pick **one** (1) instruction and **sketch/draw** it in the box below.

Do the same for **Section 2: Making List**.

Preparation stage number	Making stage number

Fill in the number of **each** stage you have sketched/drawn. [8]

Evaluation

(d) (i) List **two** (2) good things about the design of this game.

(I)
 [2]

(II)
 [2]

(ii) Look at the **design** of the game.

Give two (2) ways you could improve it (make it better).

(I)

..... [2]

(II)

..... [2]

(iii) **Sketch/draw one (1) of your ideas for improvement in the box below. Label your sketch/drawing.**

[4]

(iv) Who would this game be suitable for? Why?

It would be suitable for

..... [2]

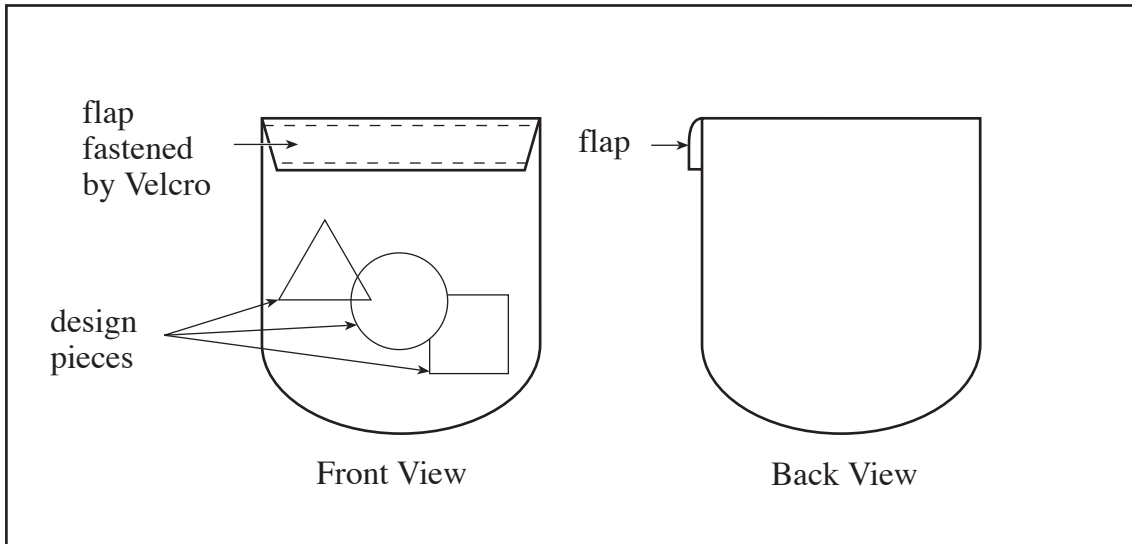
Because

..... [2]

END OF SYSTEMS AND CONTROL TECHNOLOGY SECTION

TEXTILES TECHNOLOGY

4. (a) **Name and sketch/draw two (2) pieces of equipment or tools that you would use to make this Ipod holder.**



Name of tool/equipment	Name of tool/equipment
Sketch/drawing	Sketch/drawing

[6]

(b) The stages for making the **Ipod holder** have been jumbled up in each section.

Put these sentences in the right order by writing a number in each box.

The **first** [1] stage of each section has been done for you.

Section 1: Preparation List	
• Pin paper patterns on fabric.	
• Collect tools, equipment and materials.	1
• Cut out front, back and design from material. Cut a strip of Velcro.	
• Cut out paper pattern for Ipod holder and front design.	

[6]

Section 2: Making List	
• Pin and tack the front and back together so that the right sides are inside (facing).	
• Pin, tack and machine Velcro to the flap. Remove tacking.	
• Pin, tack and machine design pieces into place. Remove tacking.	1
• Machine around edges of holder. Remove tacking.	

[6]

Section 3: Finishing / Presentation List	
• Tie/cut loose threads and trim.	1
• Turn holder to right sides. Iron it carefully. Close Velcro flap.	
• Turn under a small hem around the edge of the flap. Pin, and tack.	
• Machine around edges of flap. Tie/cut loose ends. Remove tacking.	

[6]

(c) From the **Section 1: Preparation List** (page 24), pick **one** (1) instruction and **sketch/draw** it in the box below.

Do the same for **Section 2: Making List**.

Preparation stage number	Making stage number

Fill in the number of **each** stage you have sketched/drawn. [8]

Evaluation

(d) (i) **List two** (2) good things about the design of this Ipod holder.

(I)

..... [2]

(II)

..... [2]

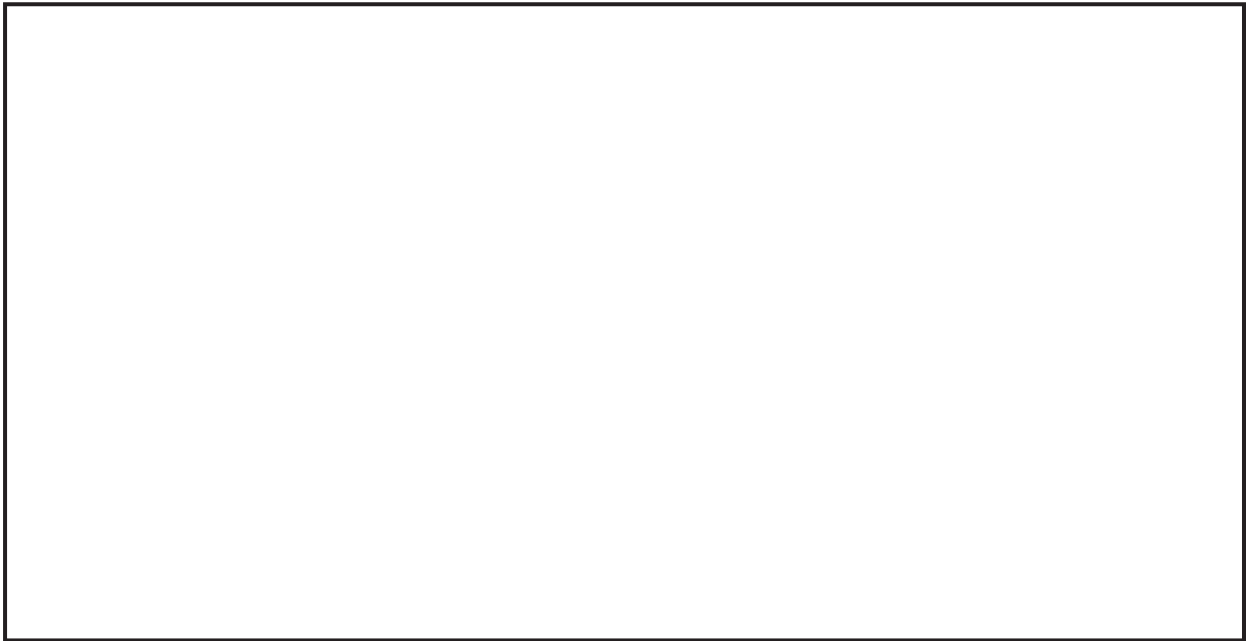
(ii) Think about the **design/shape** of the Ipod holder.

Give two (2) ways you could improve it (make it better).

(I)
..... [2]

(II)
..... [2]

(iii) **Sketch/draw one (1) of your ideas for improvement in the box below. Label your sketch/drawing.**



[4]

(iv) What **other** purpose would this Ipod holder be suitable for? Why?

It would be suitable for
..... [2]

Because
..... [2]

END OF TEXTILES TECHNOLOGY SECTION