

AN ROINN OIDEACHAIS AGUS EOLAÍOCHTA

Vocational Specialism - Graphics & Construction Studies (240 marks)

Tuesday, 11th June 2002
Morning 9.30 am - 11.00 am.

For the Superintendent only

<p>Centre Stamp</p>

1.	Total of end of page totals	
2.	Aggregate total of all disallowed question(s)	
3.	Total mark awarded (1 minus 2)	
4.	Bonus mark for answering through Irish (if applicable)	
5.	Total mark awarded if Irish Bonus (3+4)	
Note: The mark in row 3 (or row 5 if an Irish Bonus is awarded) must equal the mark in the <i>Mór-Iomlán</i> box on the script		

General Directions

1. Write your examination number in this space:

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2. There are two sections in this paper.

Section 1 - Answer **both** questions. - 105 marks

Q1 - Short answer questions

Q2 - Graphic Communication

Section 2 - Five questions, answer **any three**. - 135 marks

Q1 - Construction

Q2 - Building Services

Q3 - Woodcraft

Q4 - Design and Manufacture of Educational Toys

Q5 - Computer Aided Design

3. Write your answers in the spaces provided and include sketches as appropriate.

Section 1

**COMPULSORY
QUESTION 1**

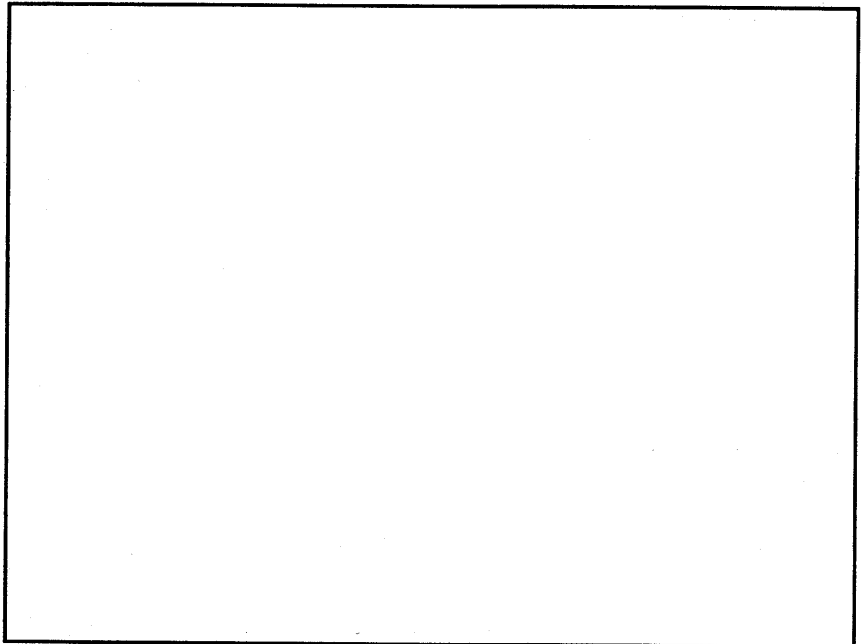
(60 Marks)

1. Answer any TWELVE of the following FIFTEEN short questions.

(a) Briefly describe the project you completed for the end of year assessment.

(b) (1) Sketch, in the space provided, **ONE** cutting tool you used in the making of this project.

(2) Name this tool:



(c) Name the material used in your project and give **ONE** reason for selecting that material.

Name: _____

Reason: _____

(d) Describe the finish you applied to the project work:

(e) Describe the research you carried out when designing this project.

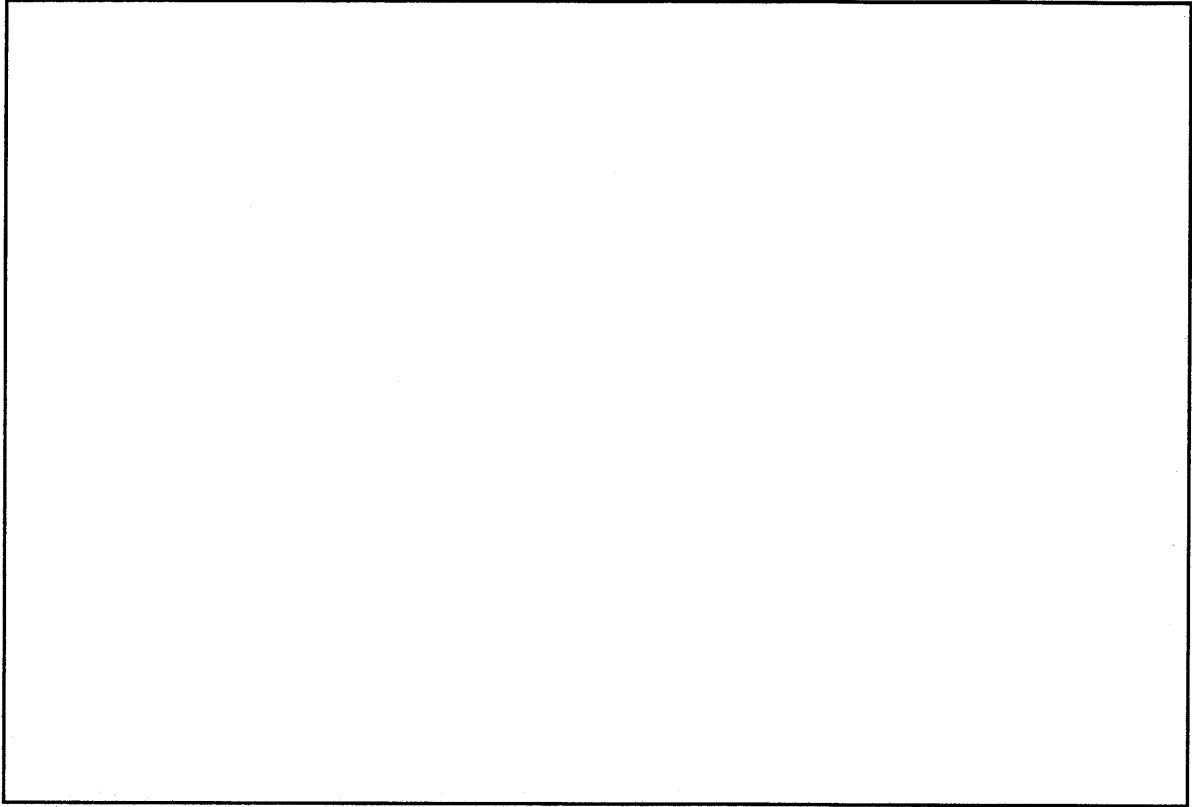
(f) List **TWO** things you learned from completing your practical work:

(g) Give **TWO** reasons explaining why CAD is important to many areas of construction:

(h) Give **TWO** disadvantages of using cordless power hand tools.

(i) Name **TWO** materials used in house construction for insulation purposes.

(j) Sketch, in the space provided, **ONE** marking-out tool that you used during this course:



(k) Name the tool above and describe how it is used:

(l) Explain what is the meaning of a 'serviced site'.

(m) Name the materials that are used to make concrete and describe a typical concrete mix for a house foundation.

(n) List **TWO** precautions that need to be observed when erecting scaffolding on building sites:

(o) Select **ONE** of the following occupations and describe the duties involved.

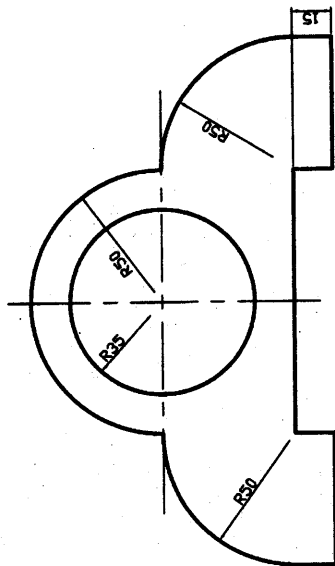
block-layer, foreman, architect

Occupation: _____

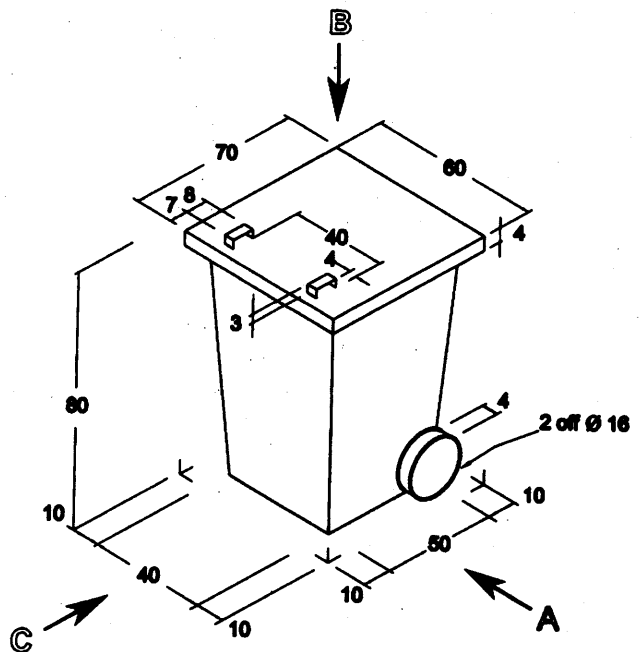
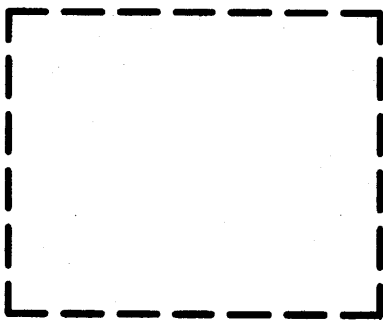
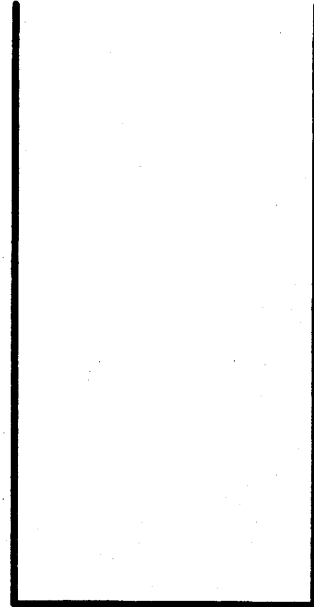
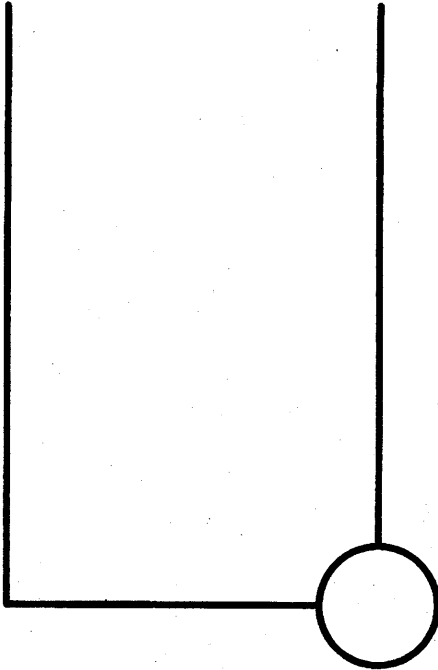
Duties: _____

2. Graphic Communication

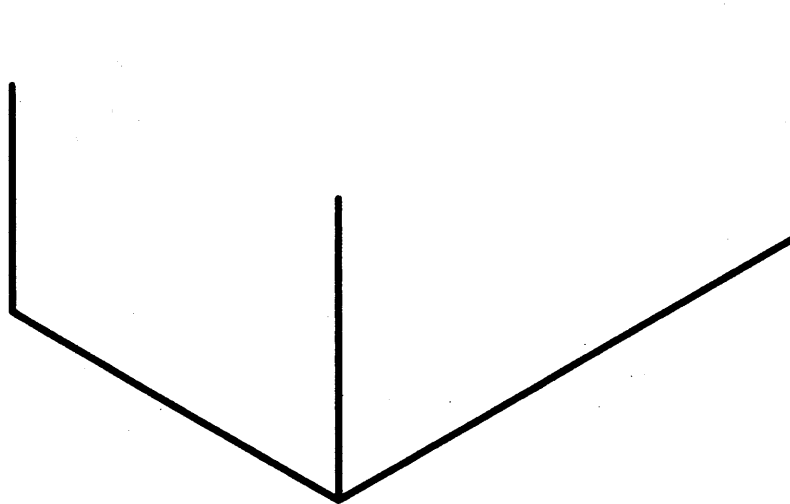
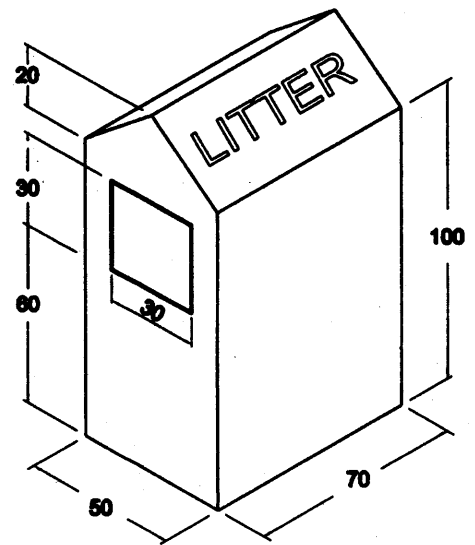
- (a) The outline of a clock-case is shown below.
Complete the outline, showing all construction lines.
Apply appropriate shading/colour.



- (b) A pictorial view of a wheelie-bin is shown. Complete the following orthographic views:
- (1) An elevation looking in the direction of arrow A.
 - (2) A plan projected from the elevation (arrow B).
 - (3) An end view looking in the direction of arrow C.
 - (4) Insert four main dimensions.



(c) Complete the isometric drawing of the litter bin shown.



Section 2

(135 Marks)

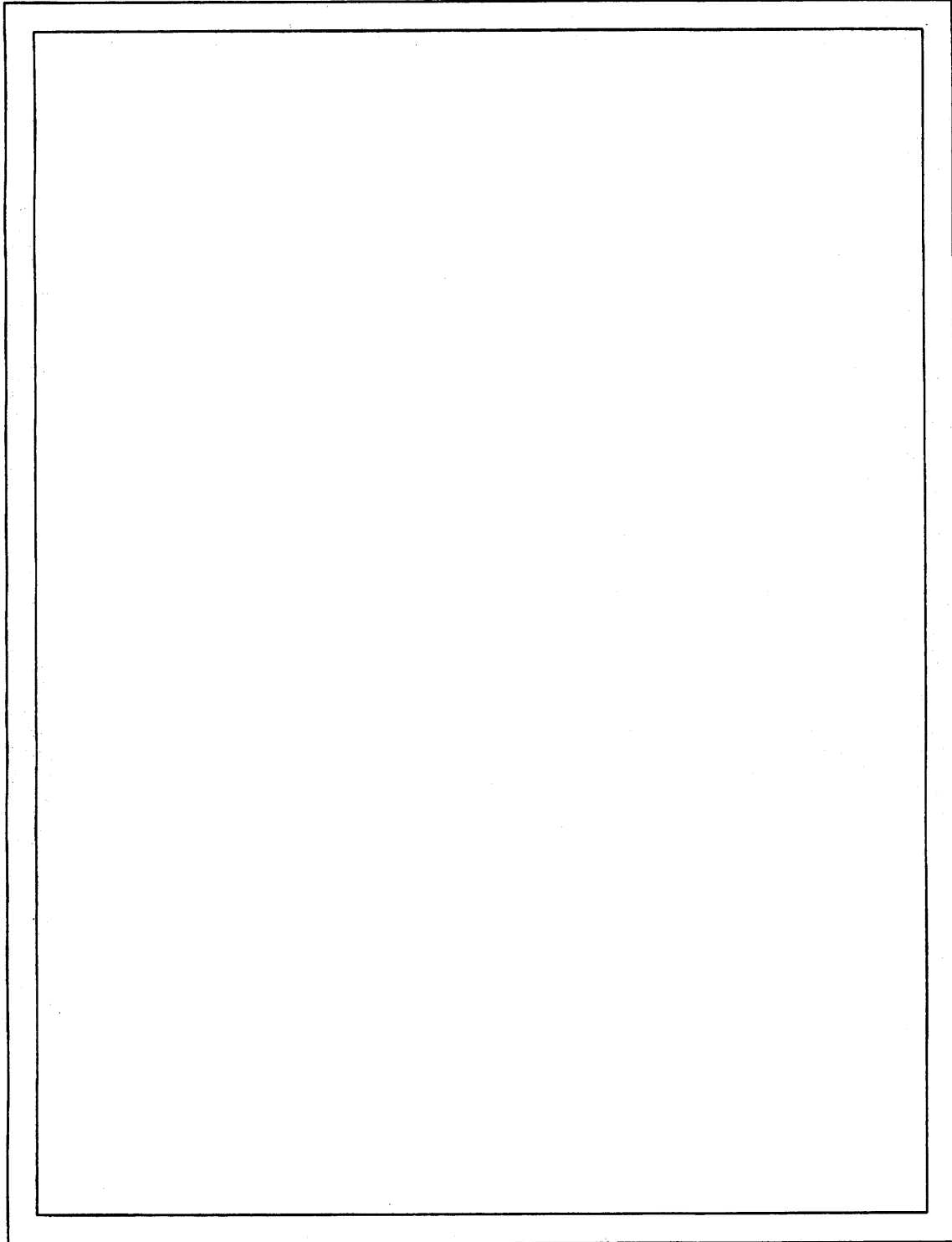
Answer ANY THREE Questions from this section.

1. Construction

(a) Describe the type of planning permission that should accompany a site when it is purchased. What further steps are required to obtain full planning permission.

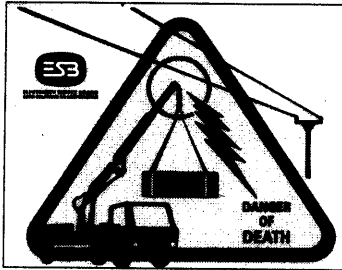
(b) Sketch a typical strip foundation for the external walls of a house. Include ground level, dpc, and concrete floor details. Label each item.

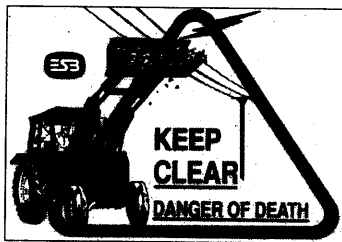
- (c) The plan of a typical bedroom, measuring 4000 mm x 3000 mm, is shown. Sketch, to an approximate scale, a furniture layout suitable for a teenager. Indicate the position for a door and a window. Shading and colour may be used.



2. Building Services

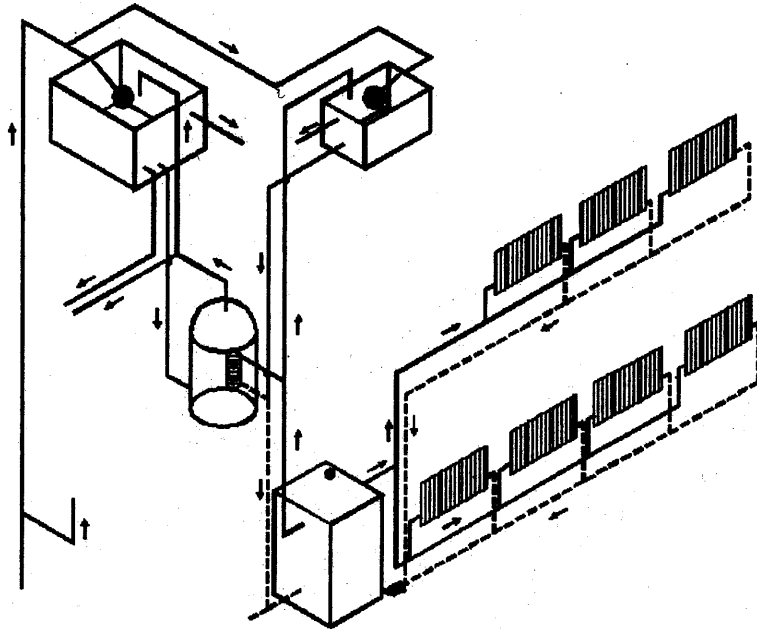
- (a) The images demonstrate potential hazards in relation to ESB cables on a construction site. Describe the scene depicted in each image and list measures to be taken to prevent these situations occurring.



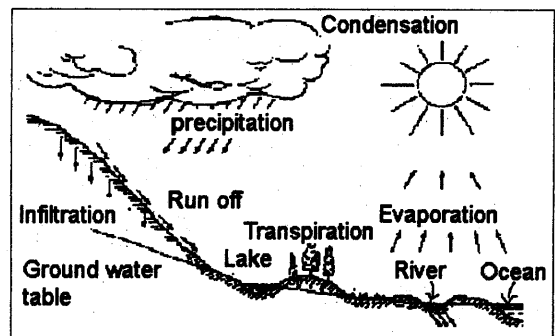




- (b) The diagram shows the layout for the indirect hot water system.
 Label the following components:
 indirect cylinder; rising main; boiler; expansion pipe; cold water storage cistern;
 expansion tank; ball valve.

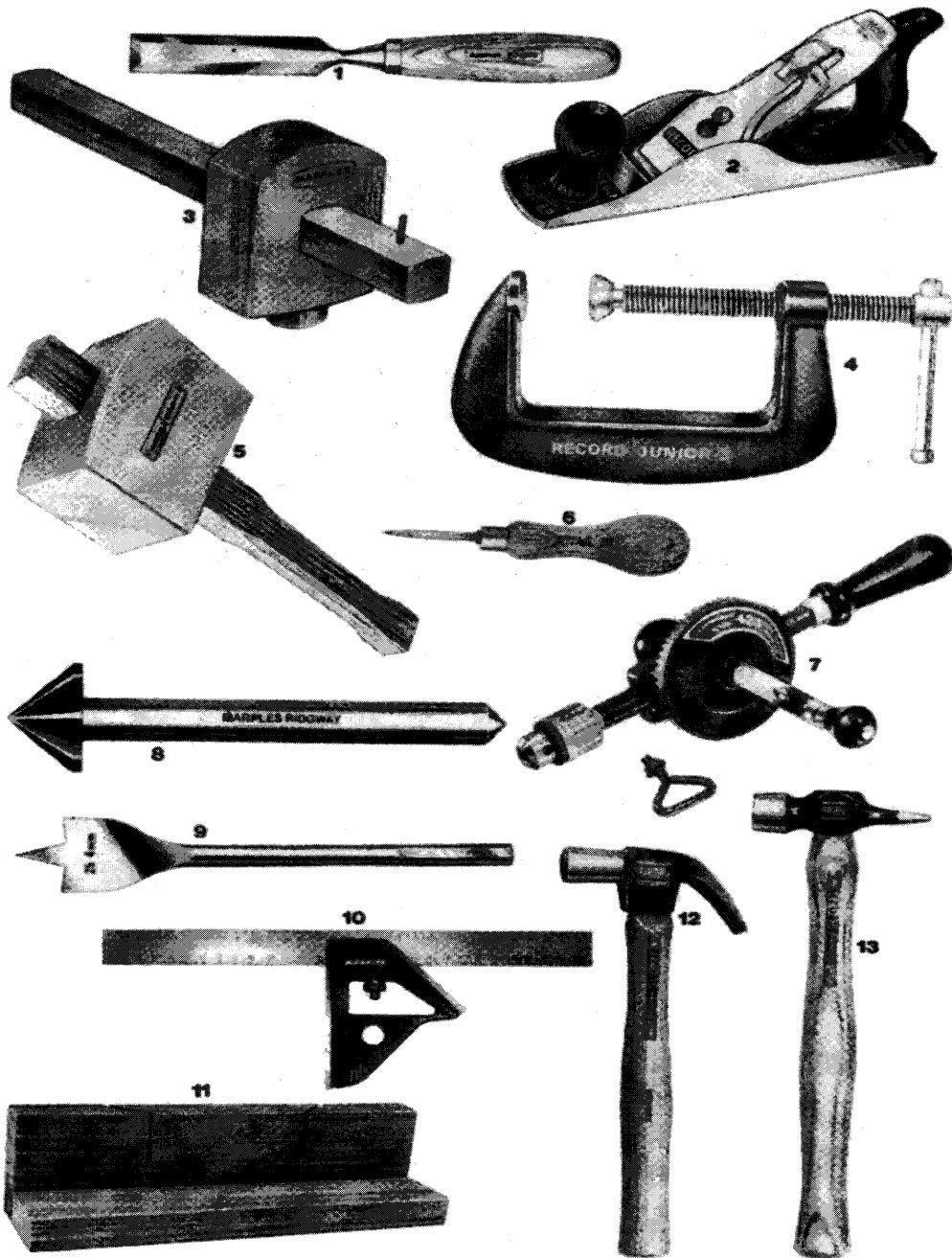


- (c) The water cycle is shown in the diagram.
 Describe how water is supplied to the home and explain how it is made safe for drinking.



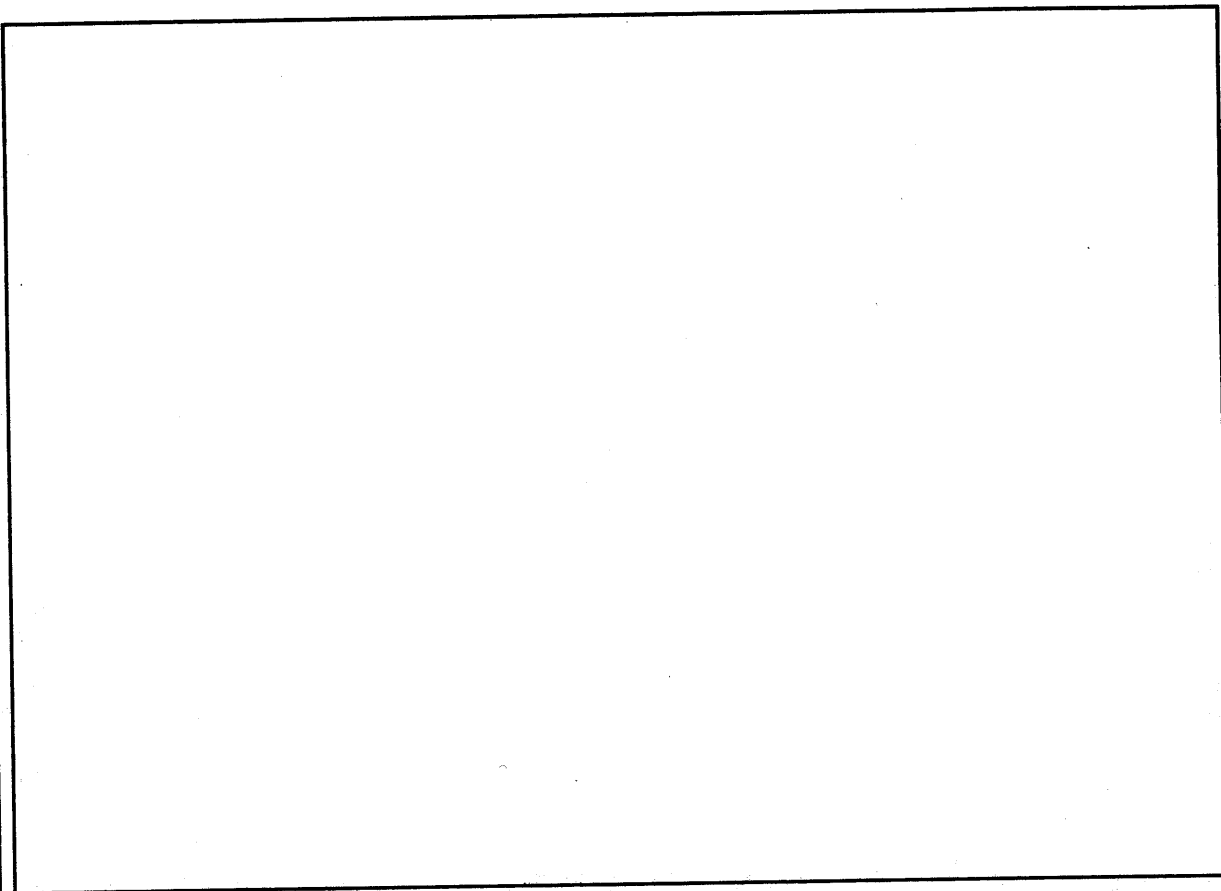
3. Woodcraft

(a) Identify TEN of the hand tools shown.



1. _____ 2. _____ 3. _____
4. _____ 5. _____ 6. _____
7. _____ 8. _____ 9. _____
10. _____ 11. _____ 12. _____
13. _____

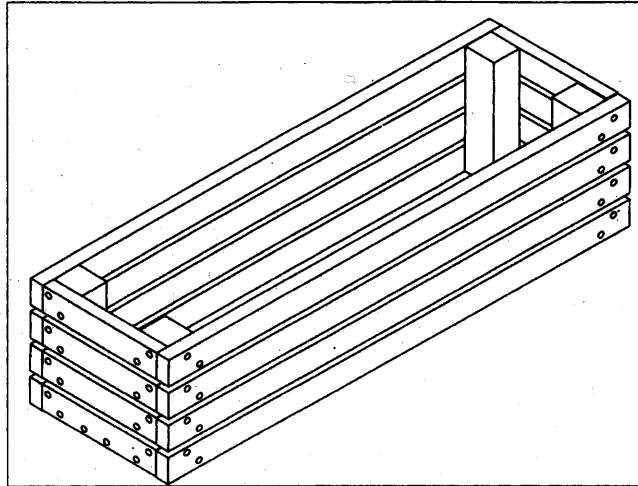
(b) (1) Sketch any ONE of the tools shown at (a).



(b) (2) Describe how the tool you sketched is used.

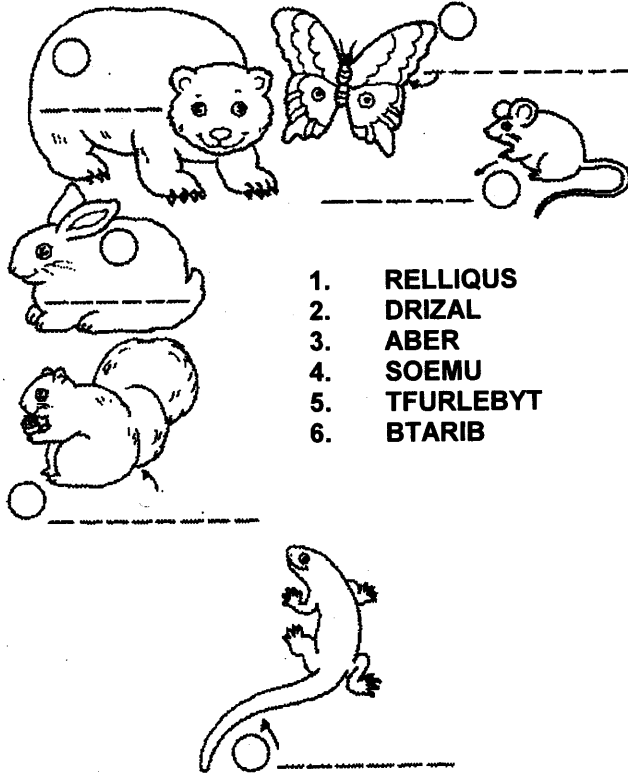
(c) A design for a window box is shown.

(1) List THREE factors that should be considered when designing a window box.



(2) List TWO changes you would make to the design shown and give reasons for your answer.

(b) (1) Unscramble the names of the animals and then match the numbers with the animals.



1. RELLIQUS
2. DRIZAL
3. ABER
4. SOEMU
5. TFURLEBYT
6. BTARIB

(2) What is the educational value of this game?

(c) You are required to turn the image of 'Winnie the Pooh' into a puzzle.

(1) Draw the puzzle shapes on top of the image.

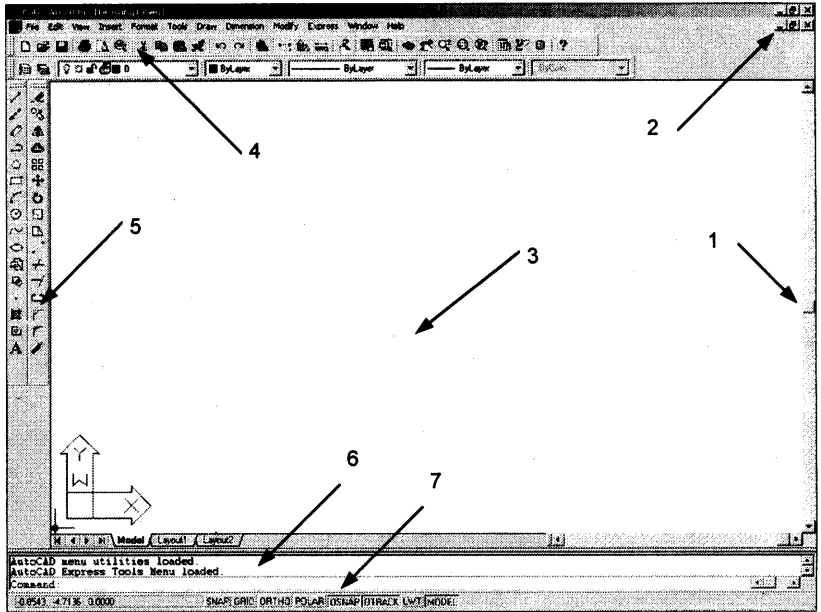
(2) Describe how you would cut out the puzzle.



(3) What age child would this puzzle suit?

5. Computer Aided Design

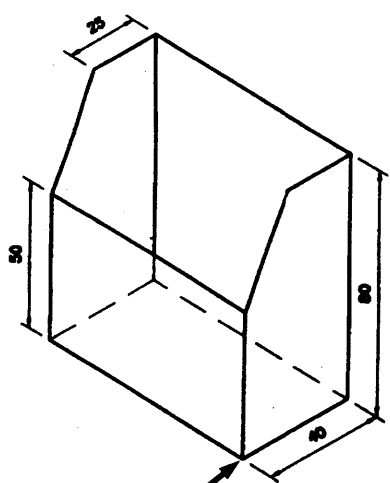
(a) (1) Name FIVE of the parts of a typical CAD drawing screen shown below.



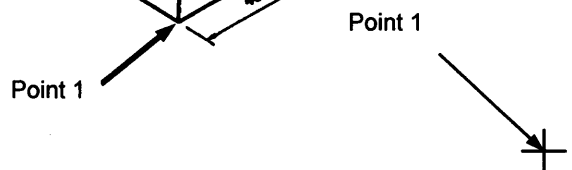
1.
2.
3.
4.
5.
6.
7.

(a) (2) Give ONE reason explaining why it is important to take regular breaks when using computers

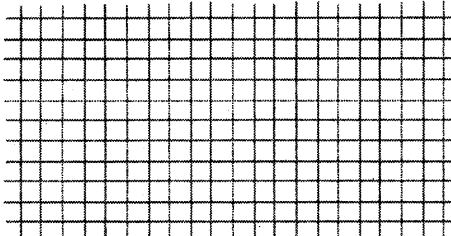
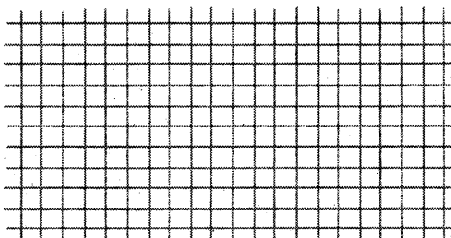
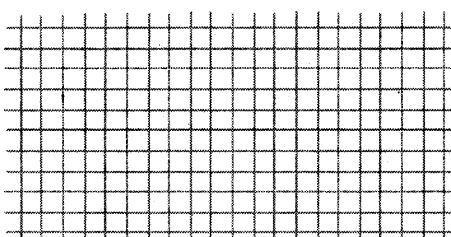
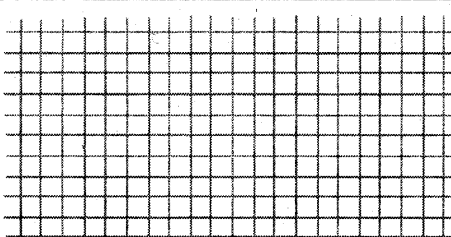
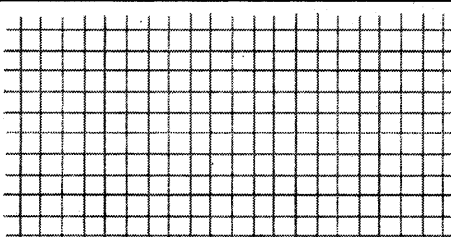
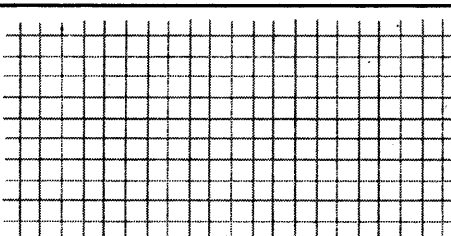
(b) A pictorial view of a diskette box is shown. Starting at point 1 and using the following relative co-ordinates draw the end-view of the box.



- From point 1
- To point: @40,0
- To point: @0,80
- To point: @-25,0
- To point: @-15,-30
- To point: @0,-50 or C (to close).



(c) Describe, with the aid of notes and sketches, the effect of any **FIVE** of the following drawing commands.

COMMAND	SKETCH	DESCRIPTION
<p>LINE</p>		<p>_____</p> <p>_____</p> <p>_____</p>
<p>ARC</p>		<p>_____</p> <p>_____</p> <p>_____</p>
<p>CIRCLE</p>		<p>_____</p> <p>_____</p> <p>_____</p>
<p>ELLIPSE</p>		<p>_____</p> <p>_____</p> <p>_____</p>
<p>POLYGON</p>		<p>_____</p> <p>_____</p> <p>_____</p>
<p>POLYLINE</p>		<p>_____</p> <p>_____</p> <p>_____</p>

Right hand flap on page 19 of twenty

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	Marks Awarded
Section 1 Q1	
Section 1 Q2	
Section 2 Q1	
Section 2 Q2	
Section 2 Q3	
Section 2 Q4	
Section 2 Q5	
Total	

NB: Page 20 of twenty is a blank page.