

Annual Examinations for Secondary Schools 2015

FORM 3

SCIENCE/DESIGN & TECHNOLOGY

TIME: 1 hour

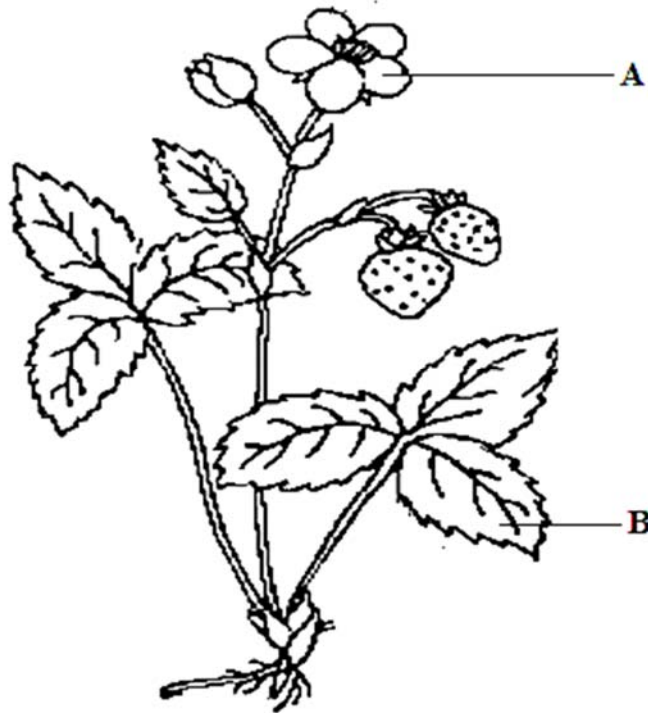
NAME: _____

CLASS: _____

Answer ALL questions. (This paper is out of 30 marks.)

1. The diagram below shows a flowering plant. Choose words from the box to label parts A and B.

flower fruit leaf root stem

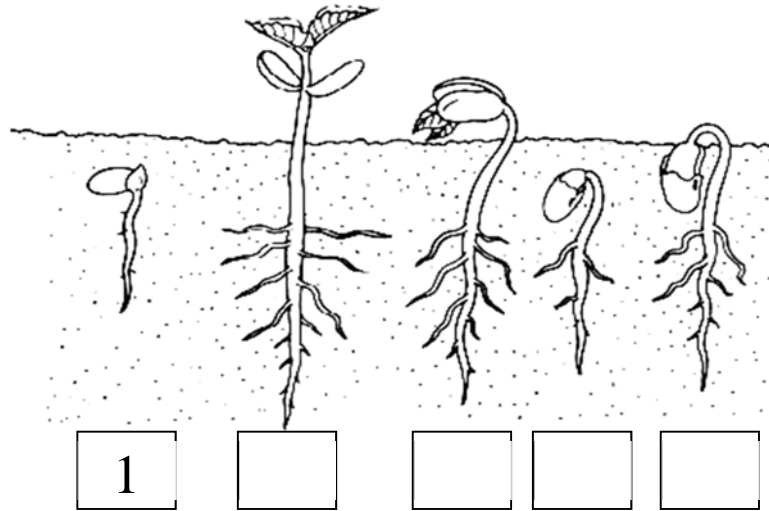


A: _____

B: _____

(1, 1 marks)

2. The pictures below show a germinating seed. Put the steps in the correct order.



1

(0.5 x 4 marks)

3. Study the animals shown below and answer the questions that follow.



frog



snail



chameleon

Name the animal that:

a) is an invertebrate _____

b) lays eggs in water _____

c) is covered with scales _____

(1, 1, 1 marks)

4. Dogs are mammals. Tick (✓) TWO characteristics common to mammals.

- Body covered with feathers
- Lay eggs with a hard shell
- Give birth to their young
- Body covered with fur



(0.5 x 2 mark)

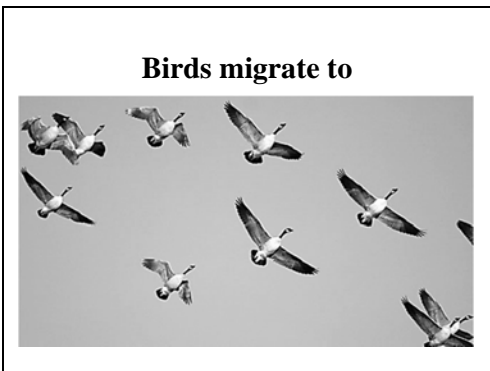
5. Animals have different adaptations to survive in their habitats. Match the animal adaptation with the correct explanation.



**find warmer places
and food.**



**keep warm in their cold
habitat.**



**protect themselves from
danger.**

(1, 1 marks)

6. John is at the beach. As he was playing on the sand near the sea, he noted some things.



Underline the correct answer:

- a) Sand is a (solid, liquid, gas).
 - b) Sea water is a (solid, liquid, gas).
 - c) Air is a (solid, liquid, gas).
 - d) Sea water is a (solute, solvent, solution).
 - e) Salt from sea water can be obtained by (freezing it, evaporation to dryness, mixing it with oil).
- (5 marks)

7. John's family prepared their meal on a barbeque set, which is made of steel. Wood was used to cook the food. The cooking utensils were made of stainless steel but their handles were made of plastic.

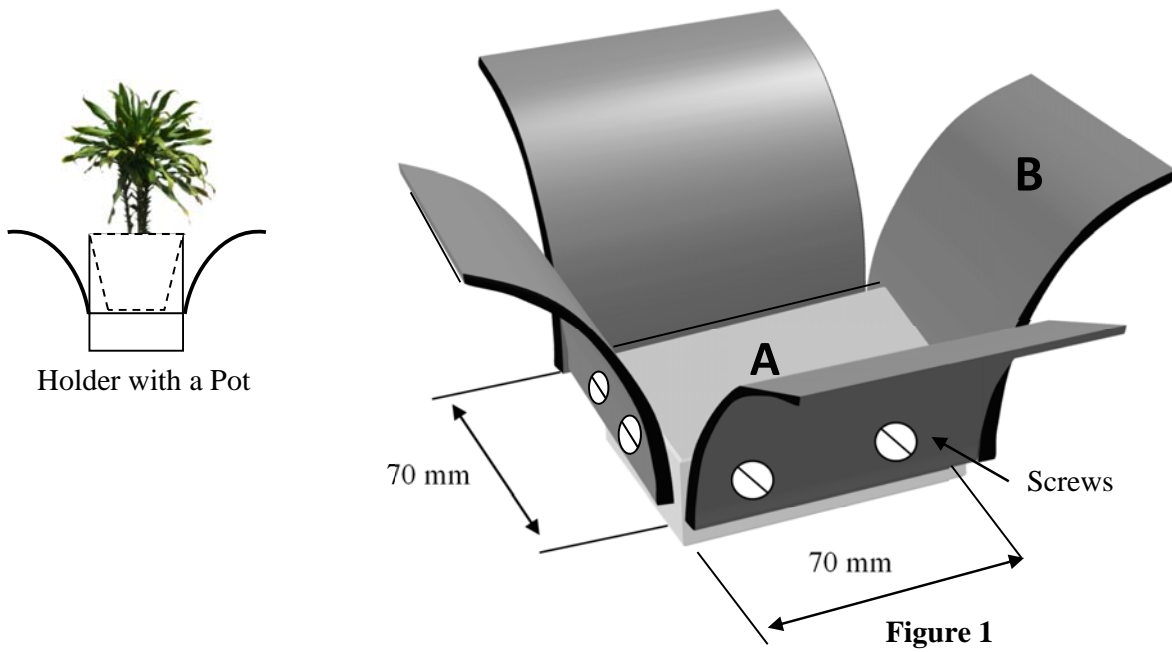


Underline the correct answer:

- a) Steel is a (metal, non-metal).
- b) Wood is a (synthetic, natural) material.
- c) Plastic is a (synthetic, natural) material.
- d) Plastic is used for the handle because it is a (good, bad) conductor of heat.
- e) If the barbeque set was made of copper it would not form rust. Why is copper NOT used to make barbeque sets but steel is used?

(5 marks)

8. Figure 1 is a plant holder made in a D&T lab.



a) Draw accurately (using a ruler) this plastic leaf 'B' as a flat 2D object of size 70mm wide and 100 mm tall on the given grid (start at X):

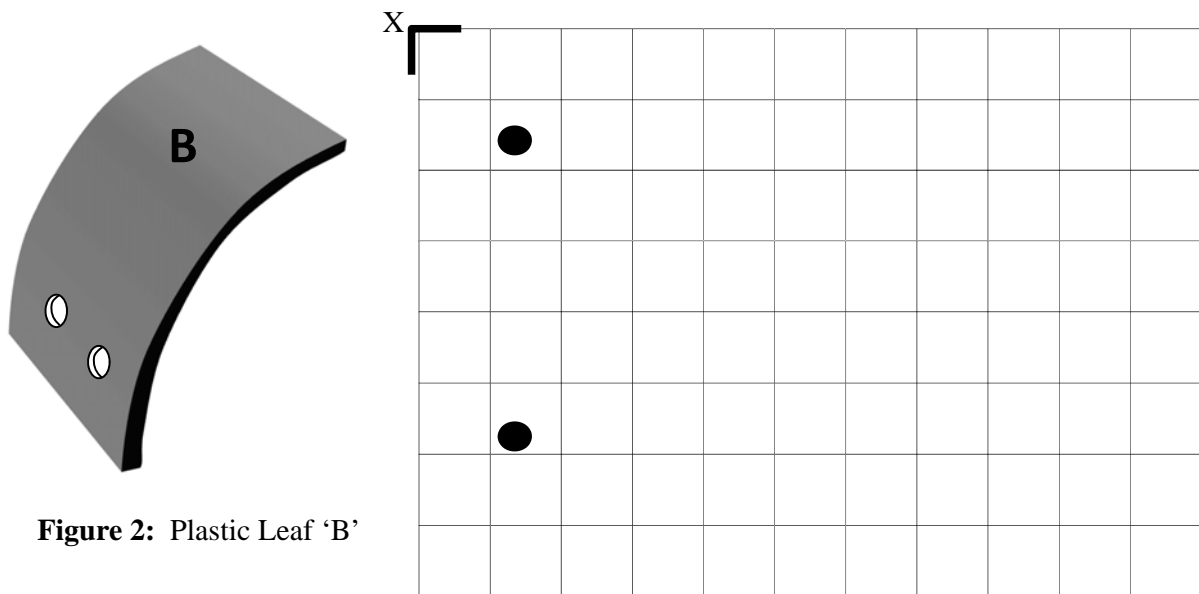
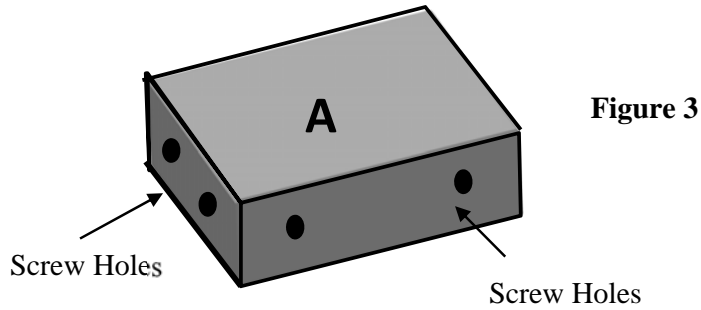


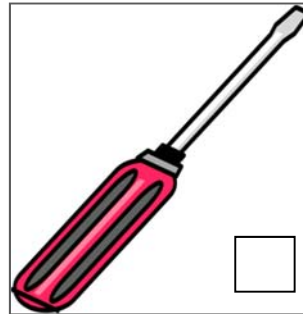
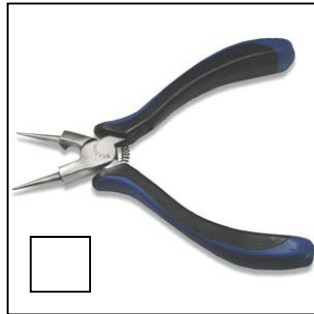
Figure 2: Plastic Leaf 'B'

(2 marks)

b) Figure 3 is the base of the plant holder.



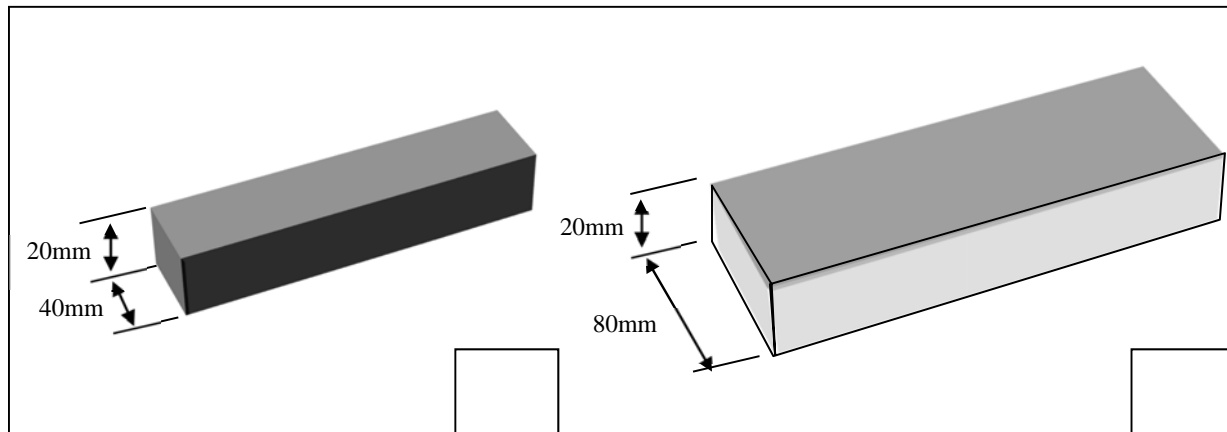
Tick (✓) the tool that can be used to fix the screws in place:



(1 mark)

c) You are asked to produce a base similar to part 'A' of the plant holder. Which piece of wood can be used to cut a 70mm by 70mm block needed for the base?

i) Tick (✓) the correct answer.

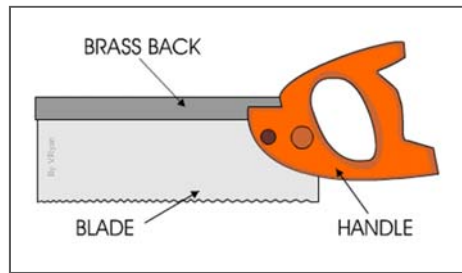


(1 mark)

ii) Give a reason for your answer:

(1 mark)

9. The following figure shows a tool called BACKSAW used to cut out the wood. Use the labels in the figure to fill in the blanks in the sentence that follows.

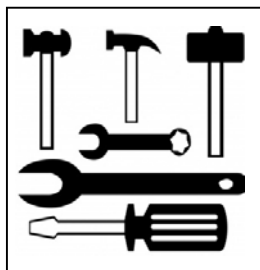


a) You need to hold the backsaw from the _____.

b) The sharp cutting edge of the _____ can be dangerous if used incorrectly.

(1, 1 marks)

10. Join the lines from each picture below to the best matching phrases:



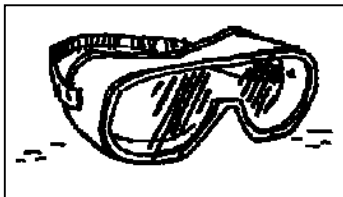
DESIGN & PLANNING



IDEA SKETCHES



SAFETY



MAKING

(1, 1, 1 marks)