

NAN HUA PRIMARY SCHOOL
CONTINUAL ASSESSMENT 2
PRIMARY FIVE
SCIENCE

Name : _____ ()
Class : Primary 5 / _____
Date : 23 August 2007
Duration : 1 hr 30 min

MARKS	
Sect A:	/ 40
Sect B:	/ 40
Total :	/ 80

Parent's Signature : _____

Section A: (20 x 2marks = 40marks)

For each question from 1 to 30, four options are given. One of them is the correct answer. Make your choice (1, 2, 3 or 4). Shade the correct oval (1, 2, 3 or 4) on the Optical Answer Sheet.

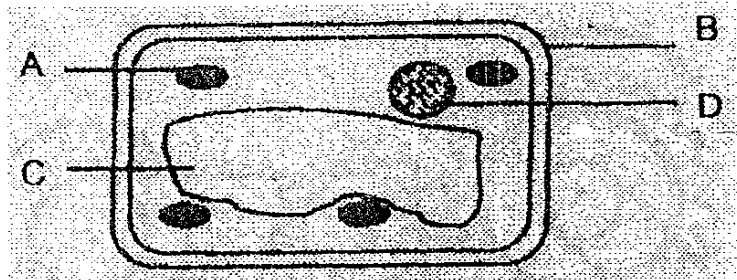
1. Which of the following statements are **true** of man-made satellites?

- A: They move around the Sun in fixed paths called orbits.
- B: They enable us to watch live broadcasts.
- C: They are sent to space by rockets.

- (1) A and B only
- (2) B and C only
- (3) A and C only
- (4) A, B and C

62

2. The diagram below shows a plant cell.



Which one of the following parts of the cell is able to capture light energy?

- (1) A
- (2) B
- (3) C
- (4) D

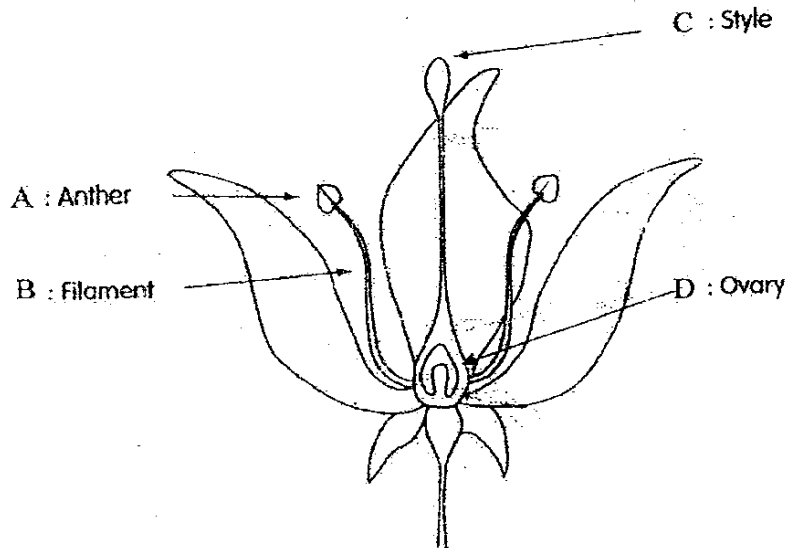
3. Which of the following statements are true?

- (A) All living things reproduce to ensure the continuity of their own kind.
- (B) Animals would become extinct if they do not reproduce to replace the deaths of their own kind.
- (C) Endangered species are groups of animals that are fast disappearing from the Earth.

- (1) A and B only
- (2) B and C only
- (3) A and C only
- (4) A, B and C

63

4. Which part of the flower is wrongly labelled?



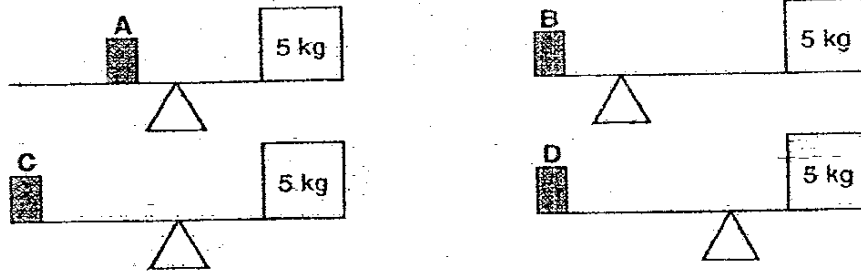
- (1) A
- (2) B
- (3) C
- (4) D

5. Which one of the following statements is false?

- (1) A force is a push or a pull.
- (2) A force can change the speed of a moving object.
- (3) A force can change the shape of an object.
- (4) The repulsion of like poles of a magnet is a pulling force.

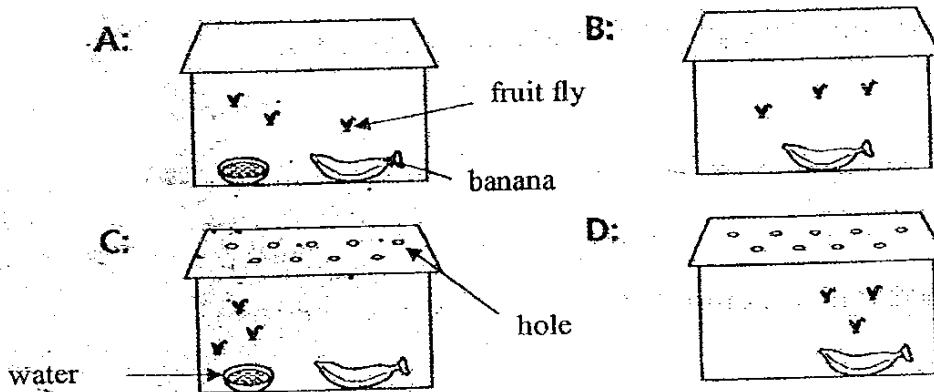
64

6. Study the four levers below. Each lever supports a 5 kg load and a labelled object. Which object is the **heaviest**?



- (1) A
- (2) B
- (3) C
- (4) D

7. Tim set up an experiment to see if animals will die without water.



Which 2 set-ups should he use in order to carry out a fair test?

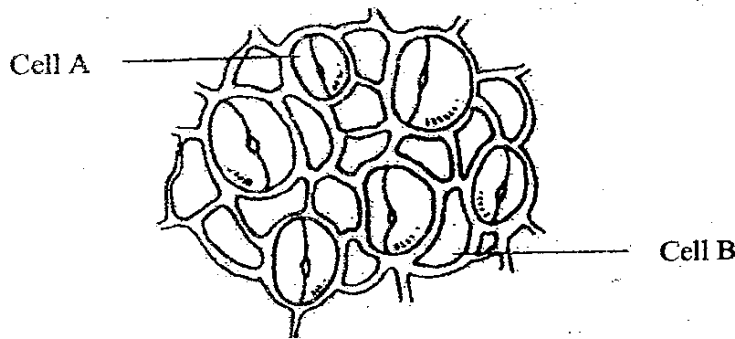
- (1) A and C
- (2) B and C
- (3) A and D
- (4) C and D

65

8. Why do we only feel the heat from the Sun and not from the other stars in the universe?

- (1) The other stars do not give out heat.
- (2) The Sun is the hottest star in the universe.
- (3) The other stars are very far away from the Earth.
- (4) The other stars only appear at night while the Sun appears in the day.

9. Study the diagram below. It shows the underside of a green leaf seen under a microscope.



What one of the following statements is true about cells A and B?

- (1) Cell A aids in the exchange of gases but Cell B does not.
- (2) Cell B contains chloroplasts but Cell A does not.
- (3) Cell A has a cell membrane but Cell B does not.
- (4) Cell A is a dead cell but Cell B is a living cell.

10. Mr and Mrs Ang have the following features.

	Hair	Eyes	Earlobe	Height
Mr Ang	Straight	Black	Detached	Short
Mrs Ang	Curly	Brown	Detached	Short

They have four children and the table below describes their features.

	Hair	Eyes	Earlobe	Height
Annice	Straight	Brown	Detached	Short
Benny	Curly	Brown	Detached	Short
Candice	Curly	Black	Attached	Tall
Danny	Straight	Black	Detached	Short

One of the children is adopted. Who is most likely to be the adopted child?

- (1) Annice
- (2) Benny
- (3) Candice
- (4) Danny

11. Which of the following are plants that reproduce from spores?

- A: Maidenhair fern
- B: Moss
- C: Mushroom

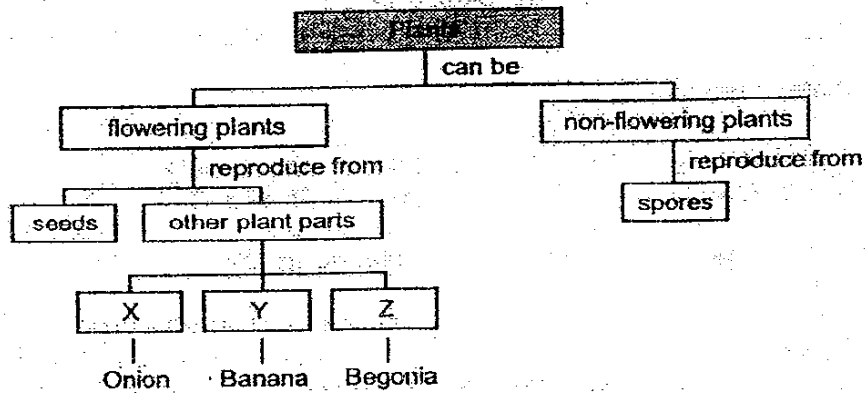
- (1) A only
- (2) A and B only
- (3) B and C only
- (4) A, B and C

12. The diagram below shows a new shoot growing from the base of a parent plant's stem. This is an example of reproduction from _____.



- (1) underground stems
- (2) suckers
- (3) leaves
- (4) seeds

13. Study the classification chart below.

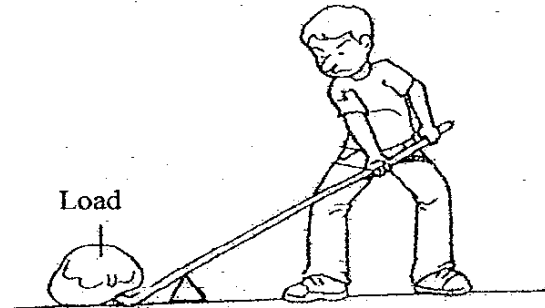


Based on the classification chart above, which one of the following statements is **false**?

- (1) Onion and begonia plants are similar because they can reproduce from plant parts other than seeds.
- (2) Begonia and banana plants are different because they reproduce from different plant parts.
- (3) Banana plants are flowering plants that can reproduce from plant parts other than seeds.
- (4) All flowering plants reproduce from seeds only.

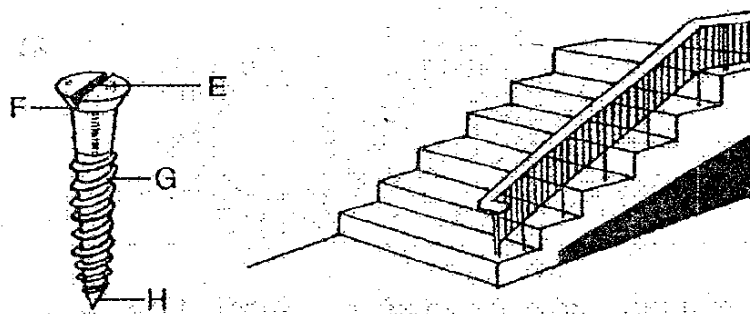
68

14. The picture below shows a man using a simple machine to lift a load.



What happens if a similar but shorter simple machine is used to lift the same load?

- (1) The simple machine can no longer change the direction of the applied force.
 - (2) The man has to apply a greater force to lift the load.
 - (3) The man can lift the load more easily.
 - (4) The man can lift the load with the same amount of effort.
15. The figures below show a screw and a staircase.

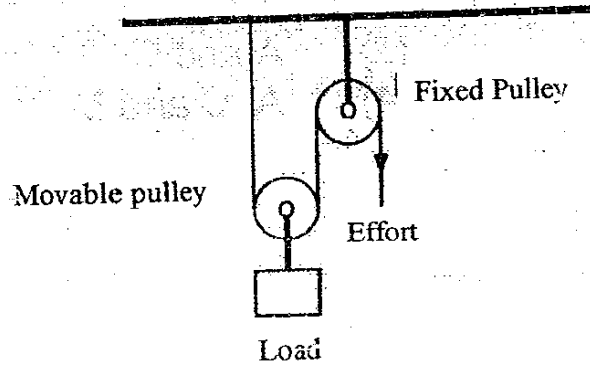


Which part of the screw is a simple machine that works on the same principle as the staircase?

- (1) E
- (2) F
- (3) G
- (4) H

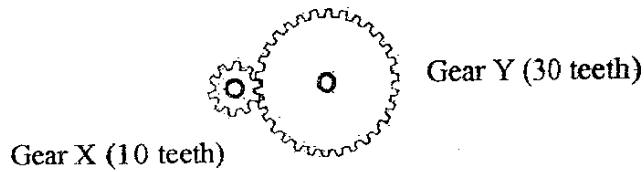
69

16. In the diagram below, when the load moves a distance of 10 cm, the effort would have moved a distance of _____.



- (1) 5 cm
- (2) 10 cm
- (3) 15 cm
- (4) 20 cm

17. Study the picture of a pair of interlocking gears shown below.

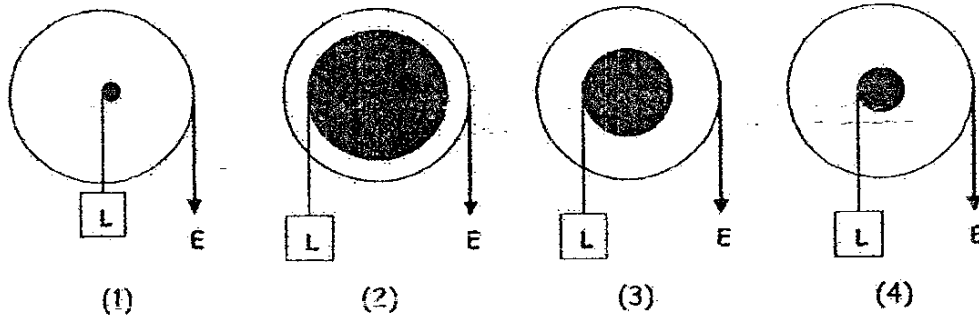


How many rotations will Gear X make when Gear Y makes 3 rotations?

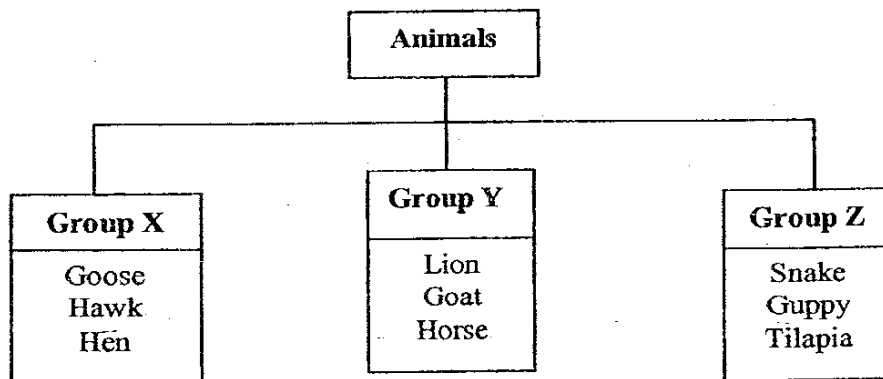
- (1) 1
- (2) 3
- (3) 6
- (4) 9

70

18. Which one of the following wheel and axles requires the **least** effort [E] to lift the same load [L]?



19. Study the classification table below.



Which of the following animals can be grouped into X, Y and Z?

	Group X	Group Y	Group Z
(1)	Duck	Sheep	Crocodile
(2)	Turtle	Ant	Goose
(3)	Peacock	Lizard	Tortoise
(4)	Rhinoceros	Lobster	Emu

ff

20. Which of the following are properties of a plastic bag?

- A: Hard
- B: Light
- C: Brittle
- D: Waterproof
- E: Floats on water

- (1) A, C and E only
- (2) B, C and D only
- (3) B, D and E only
- (4) C, D and E only

**NAN HUA PRIMARY SCHOOL
CONTINUAL ASSESSMENT 2
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Name : _____ ()

Class : Primary 5 / _____

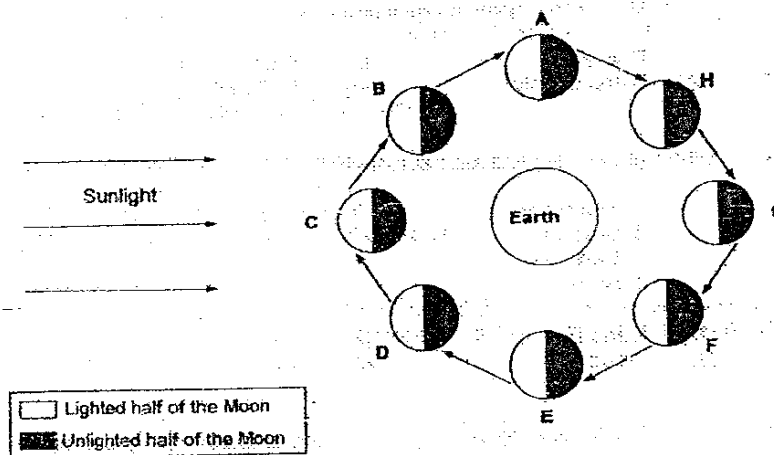
MARKS	
	40

Section B: (40marks)

Write your answers to question 21 to 36.

The number of marks available is shown in brackets [] at the end of each question or part question.

21. The diagram below shows the different positions of the Moon when it moves around the Earth every lunar month.



- (a) Based on the above diagram, state an observation regarding the lighting up of the Moon by the Sun. (1 m)

- (b) At which positions will you see the Crescent Moon? (1 m)

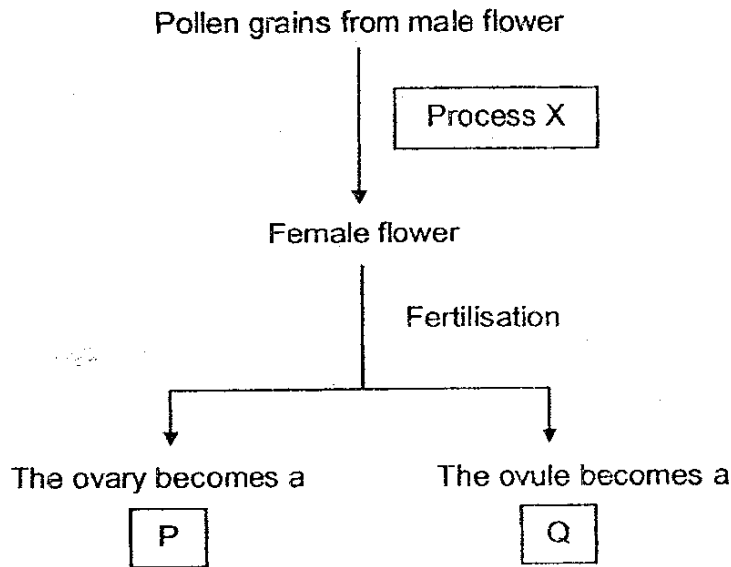
_____ *JK*

Score	
	2

22. Put a "T" for statements that are **true** and an "F" for statements that are **false**. (2 m)

(a)	Only animals reproduce to ensure the continuity of their species.	
(b)	Some species of living things became extinct because their habitats were destroyed.	
(c)	Asexual reproduction involves only one organism.	
(d)	Sexual reproduction occurs only in animals.	

23. Study the diagram below.



Identify Process X, P and Q.

(3m)

(i) Process X : _____

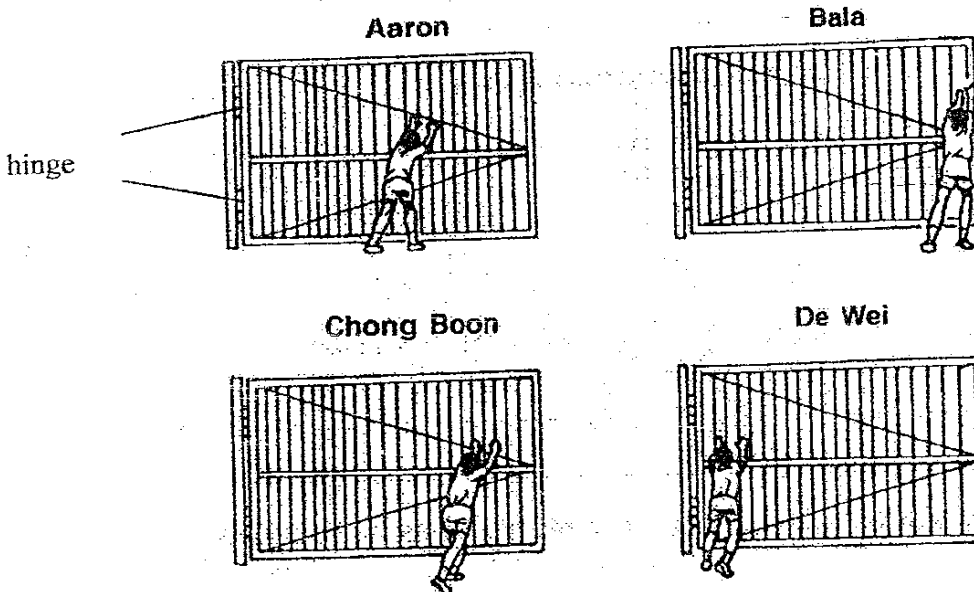
(ii) P : _____

(iii) Q : _____

75

Score	5
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24. The diagrams below show 4 boys trying to push open the same gate.



(a) Study the diagrams shown above and arrange the boys according to the amount of effort each boy applied to push the gate open in ascending order. (2 m)

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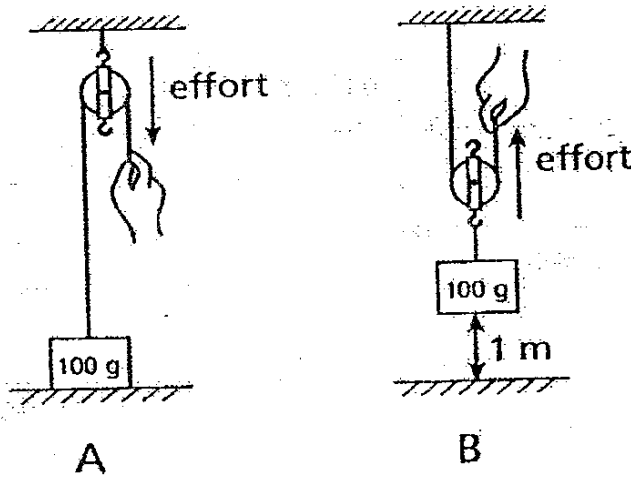
Least Effort Most Effort

(b) State the relationship between the position of the boys and the amount of effort applied to push open the gate. (2 m)

76

Score	4
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25. The diagram below shows two different pulleys.



(a) What is the effort needed to lift the load in pulley B? (1 m)

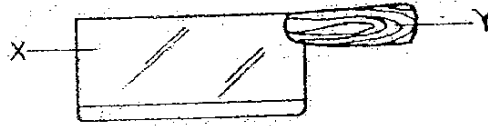
(b) What is the distance moved by the effort in pulley B when the load moves 1m? (1 m)

(c) The amount of effort used in pulley A is slightly more than the load being lifted. Why is this so? (1/m)

ff

Score	3
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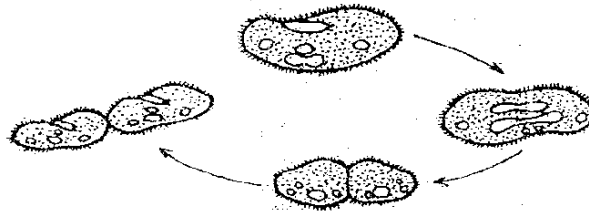
26. Look at the picture of the knife below.



a) Which part of the knife was once a living thing? (1 m)

b) Give a reason for your answer to (a). (1 m)

27. The diagram below shows how cell division occurs in the paramecium, a single-celled organism.



a) What is this process of cell division known as? (1 m)

b) Give two reasons why cell division is important in human beings. (2 m)

i) _____

ii) _____

78

Score	5
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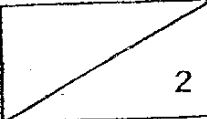
28. The following are steps in the sexual reproduction of human beings.
Write "1" to "4" in the boxes to show the correct order of occurrence.
(2 m)

The fertilised egg develops in the womb and divides many times.

An egg is released by the ovary and sperms are produced by the testes.

Major organs are formed and a baby is ready to be born.

The sperms come in contact with the egg. One of the sperms fertilises the egg by fusing its nucleus with the nucleus of the egg.

Score	
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79

29. Study the classification table on plants given below.

Group A	Group B	Group C	Group D
fern	potato	bryophyllum	banana
moss	onion	African violet	pineapple

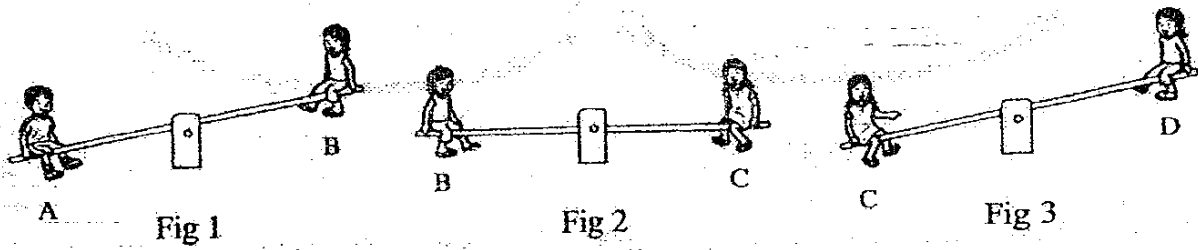
a) How are the plants grouped? (1 m)

b) In which group (A, B, C or D) would you place the begonia plant? (1 m)

Score	2
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80

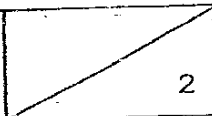
30. Study the picture below. Four children A, B, C and D sat on see-saws. Every pair sat at the same distance from the centre of the see-saw.



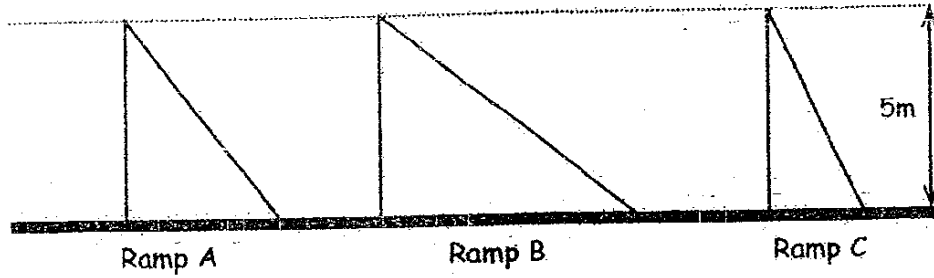
a) Which child, A, B, C or D is the heaviest? (1 m)

b) Write down one thing child C could do in order to balance the see-saw with child D in Fig 3. (Child C is not allowed to add or remove any objects) (1 m)

87

Score	
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31. Study the 3 ramps, A, B and C in the diagram shown below.



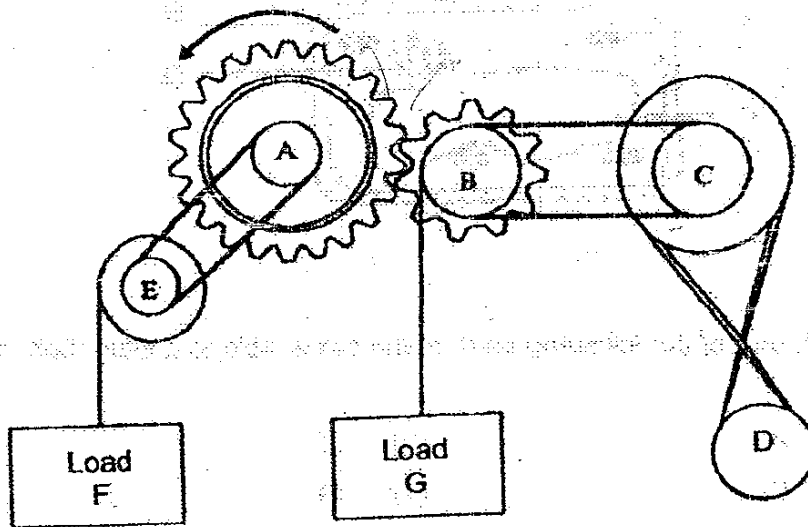
a) Which one of the ramps above, A, B or C will help you lift a load of 5 kg with the least effort? Explain your answer. (2 m)

b) Give one disadvantage of using this ramp. (1 m)

Score	
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82

32. The diagram below shows a system of wheels and gears. Study the diagram and answer the following questions.



- (a) When gear A is turned in an anti-clockwise direction, which gear and/or wheel(s) (B, C, D, E) will turn in the clockwise direction? (1m)

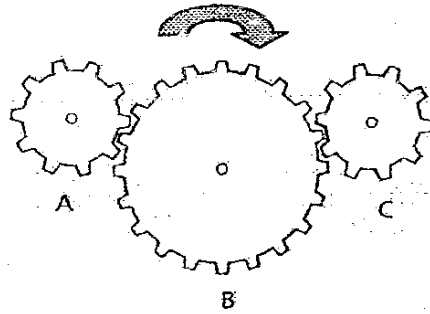
- (b) Which load will move upwards? (1m)

Load _____

Score	2
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83

33. The diagram below shows three inter-locking gears, A, B and C.



a) Draw arrows in the diagram to indicate the directions in which Gear A and Gear C are moving. (1 m)

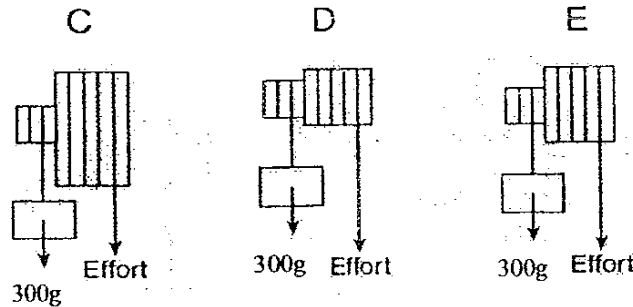
b) If Gear C has 10 teeth and Gear B has 20 teeth, how many rounds would Gear C turn if Gear B turns 10 rounds? (1 m)

c) If a Gear D is added next to Gear C, how many teeth does Gear D have if it turns 5 rounds while Gear C turns 15 rounds? (1 m)

Score	3
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84

34. Kit set up 3 wheel and axles, C, D and E as shown in the diagram below.



Each wheel has a different radius as shown in the table below. The effort in each case is just enough to lift a 300g load.

	C	D	E
Radius of wheel (cm)	6	2	4
Radius of axle (cm)	1	1	1
Effort needed (g)	50g	150g	75g

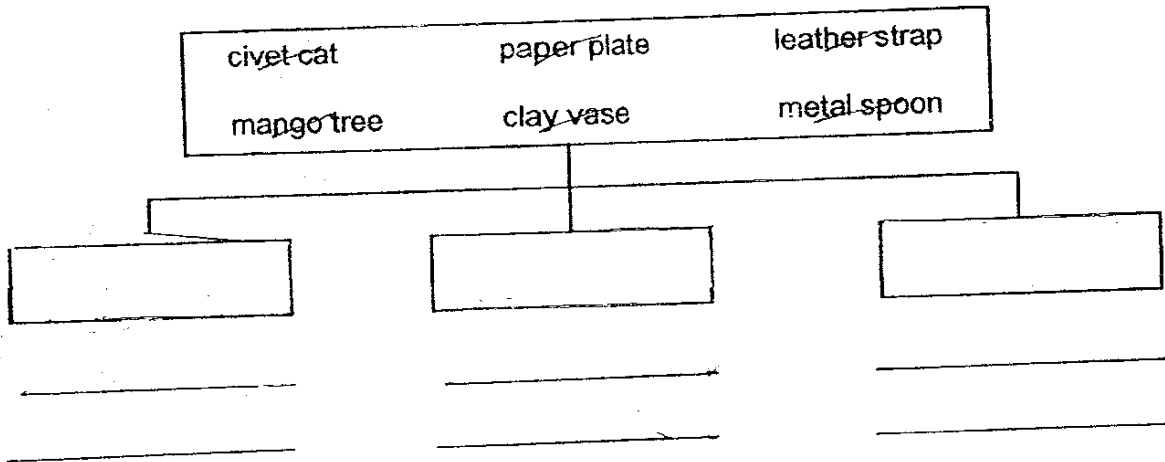
- a) Based on the results shown in the table, what can you conclude about the relationship between the radius of the wheel and the effort needed to lift the load? (1 m)

- b) If the effort needed to lift the load is 25g, what is the radius of the wheel? (1 m)

85

Score	2
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35. Classify the objects below into three groups. Give headings for your classification. (3m)



36. The picture below shows a swimming board. People who are learning how to swim usually hold onto a swimming board.



- a) What material is a swimming board normally made of? (1 m)

- b) Name one property of the material you have mentioned in part (a) which makes it suitable to be used as a swimming board. (1 m)

END-OF-PAPER

86

Score	5
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Nan Hua Primary School

Primary 5 Science CA2 Exams (2007)

Answer Keys

SECTION A : (60 MARKS)

Qn no.	Ans
1	2
2	1
3	4
4	3
5	4
6	2
7	4
8	3
9	1
10	3

Qn no.	Ans
11	2
12	2
13	4
14	2
15	3
16	4
17	4
18	1
19	1
20	3

Qn no.	Ans
21	
22	
23	
24	
25	
26	
27	
28	
29	
30	

SECTION B (40 MARKS)

- 21a. The side of the moon which faces the sun is always lighted up.
21b. At positions B and D.
- 22a. F
22b. T
22c. T
22d. F
23. (i) pollination
(ii) fruit
(iii) seed
- 24a. Bala, Chong Boon, Aaron, De Wei
24b. When the boys are further away from the fulcrum (the hinge), less effort is needed to push open the gate as the effort moves a longer distance than the load.
- 25a. The effort is 50g.
25b. The distance is 2m.
25c. A slightly more effort is required to overcome friction between the string and the pulley.
- 26a. Part Y.
26b. Y is made from wood which comes from a tree that is a living thing.
- 27a. It is known as binary fission.
27b. (i) Cell division helps to replace old and damaged cells.
(ii) Cell division is necessary for growth.

28. 3, 1, 4, 2

29a. The plants are grouped according to how they reproduce.

29b. Group C.

30a. Child A is the heaviest.

30b. Child C could move closer to the fulcrum.

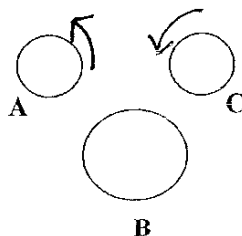
31a. Ramp B. Ramp B's inclination between the floor and the slope is the smallest so the least effort is needed.

31b. The effort moves a longer distance.

32a. Gear B and wheel C will turn in the clockwise direction.

32b. G

33a.



33b. $10 \times 20 = 10 \times 20$ Gear C would turn 20 rounds.

33c. $10 \times 15 = 5 \times 30$ Gear D has 30 teeth.

34a. When the radius of the wheel is larger, less effort is needed to lift the load.

34b. The radius of the wheel is 12cm.

35.

Living Things	Non-livings (never alive)	Non-living (once alive)
Civet cat	Metal spoon	Leather strap
Mango tree	Clay vase	Paper plate

36a. It is made of Styrofoam.

36b. It floats on water.