Name_____ **Index No.**_____

Class_____

Candidate's Signature_____

2012 **Date** _____

P1 SCIENCE
PTE MOCK
MARCH 2018
TIME: 2 ½ HOURS

PRIMARY TEACHERS MOCK EXAMINATION
SCIENCE
2½ HOURS

INSTRUCTIONS TO CANDIDATE

1. *Write your name, class and Index number in the spaces provided above.*
2. *Sign and write the date of the examination in the spaces provided above*
3. *This paper consists of **TWO** sections **A** and **B***
4. *Answer **ALL** questions*
5. ***All** answers **MUST** be written in the spaces provided in this question paper.*
6. *Do **NOT** remove any pages from this question paper*
7. ***Candidates should answer the questions in English**.*

FOR EXAMINER´S USE ONLY

SECTION A

Question	**1**	**2**	**3**	**4**	**5**	**6**	**Total Score**
Candidates' Score							

SECTION B

Question	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**Total Score**	**GRAND TOTAL**
Candidates' Score											

This paper consists of 13 printed pages
Candidates should check the paper to ascertain that all the pages are printed as indicated and that no questions are missing

SECTION A: (60 MARKS)

Answer ALL the questions in this section in the spaces provided.

1. Complete the following lesson plan for standard six by filling in the blank spaces.

   Topic: Reproduction in plants

   a) Subtopic (1 mark)

   _____

   _____

   b) Knowledge objective (2 marks)

   _____

   _____

   _____

   _____

   Skill objective: By the end of the lesson the learner should be able to draw and label the parts of a flower.

   c) Learning resources

   i) Flowers

   ii) _____

   iii) _____ (1 mark)

   d) Lesson presentation

   Introduction (2 marks)

Teachers activities	Learners activities

   e) Development (4 marks)

i) Guides learners to observe external parts of a flower	i) Observe external parts of a flower
ii)	

iii) Guide learners to draw and label parts of a flower	Learners draw and label parts of a flower
iv)	
conclusion - Review main parts of a flower	note main parts of a flower

2. During a science lesson on HIV and AIDS, a standard VI learner asked the teacher the importance of testing for HIV and AIDS.
   a) Name **one** scientific attitude this learner had developed (1 mark)

   _____

   _____

   b) State **four** reasons why testing for HIV and AIDS is important (4 marks)

   _____

   _____

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   c) State **three** reasons why it is sometimes necessary for the teacher to redirect questions asked by learners in class back to them. (3 marks)

   _____

   _____

   _____

   _____

   _____

   _____

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_____

d) The teacher divided the class into groups to discuss the importance of testing for HIV

i) State **one** precaution the teacher should give to the learners before the discussion (1 mark)

_____

_____

ii) State **one** other suitable practical method of teaching this content (1 mark)

_____

_____

e) Name **two** care and support measures that should be offered to persons living with HIV and AIDS. (2 marks)

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3. Standard seven pupils wanted to find out which materials conduct electricity. The following materials were available for the investigation.
Torch cells, bulbs, pieces of copper wire, pieces of aluminum, plastic paper, glass wood and rubber.

a) Draw and label a set up which can be used to check whether the materials conduct electricity. (2 marks)

b) State **three** instructions that the teacher would give to the pupils to enable them carry out the investigation using the set up. (3 marks)

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_____

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c) Name **two** skills which the learners would develop as they carry out the investigation. (2 marks)

_____

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_____

d) Give **one** reason why it may be necessary to conduct this investigation in groups (1 mark)

_____

_____

e) State the energy transformations in the investigation (2 marks)

_____

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_____

4. An investigation was carried out by a group of learners to determine the effect of the length of the string on the period of the swing of a pendulum.

a) Formulate the problem that the learners will be answering by doing this investigation (1 mark)

_____

_____

b) For the problem in 4 (a) above, suggest a hypothesis (1 mark)

_____

_____

c) Name **two** variables that need to be controlled in this investigation (2 marks)

_____

_____

_____

d) State the appropriate method that the learners would use to record the results of their investigation (1 mark)

_____

_____

e) Give **two** other methods of recording information in science (2 marks)

_____

_____

_____

f) State **three** reasons why it is important to record observations in science (3 marks)

_____

_____

_____

_____

5. a) The diagram below represents a set up that was used to demonstrate a certain property of Matter

The property demonstrated was

A Air occupies space
B Water exerts pressure
C Air exerts pressure
D Water occupies space

Key _____

Ability tested _____ (2 marks)

b) Explain why a table of specification is important in developing a test (3 marks)

_____

_____

_____

_____

c) Explain the meaning of the following terms as used in test development

i) Objectivity (1 mark)

_____

_____

_____

ii) Differentiality (1 mark)

_____

_____

_____

d) State **two** reasons why continuous assessment in science is important to the learner (2 marks)

_____

_____

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_____

6. a) A science teacher decided to engage his learners in an experiment to investigate whether water is necessary for germination.

i) State **four** roles of the teacher during the experiment (4 marks)

_____

_____

_____

_____

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_____

ii) State **three** advantages of using the experimentation method (3 marks)

_____

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_____

b) Give **two** reasons for using different methods when teaching science (2 marks)

_____

_____

_____

SECTION B: (40 MARKS)

Answer ALL the questions in this section in the spaces provided.

7. An experiment was carried out to test the effect of carbon (iv) oxide concentration on the rate of photosynthesis. The results are given in the table below:

CO_2 concentration (arbitrary units)	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08
Rate of photosynthesis (Bubbles in Oxygen)	0	2	4	6	8	9	10	10	10

a) On the grid provided plot a graph of rate of photosynthesis against carbon (iv) oxide (CO_2) concentration. (4 marks)

b) Account for the shape of the graph when the concentration of carbon dioxide was between:

i) 0 and 0.05 (2 marks)

_____

_____

_____

_____

ii) 0.06 and 0.08 (2 marks)

_____

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8. a) Explain how a single Moving pulley makes work easier. (2 marks)

_____

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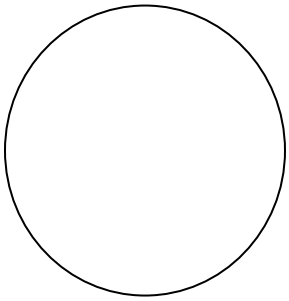
_____

b) In a wheel and axle machine, the diameter of the wheel is 20cm while that of the axle is 2.5cm. Calculate the velocity ratio of the wheel and axle machine. (2 marks)

9. The pie chart below represents the components of air by volume.



a) Name the gases represented by the letters:

P _____

Q _____

R _____ (3 marks)

b) Which component of air would have a drastic effect on temperature if its volume was increased significantly. (1 mark)

_____

_____

10. The diagram below shows a set-up that can be used as a fire alarm.

a) Explain how the se-up works (4 marks)

11. a) State **two** chemical properties of an acid (2 marks)

b) Explain why melting of candle wax is a physical change. (2 marks)

12. a) Distinguish between the terms genes and chromosomes (1 mark)

_____

_____

_____

_____

b) The figure below illustrate the human eye

i) Name the part labeled X (1 mark)

_____

ii) Name and describe the function of the part labeled Y

Name: _____

Description: _____

(1 mark)

13. The diagram below shows a simplified set up which can be used to purify water.

a) Explain how the set up is used to remove hardness of water (2 marks)

_____

_____

_____

_____

b) State **two** disadvantages of hard water (2 marks)

_____

_____

_____

14. The diagram below represents an instrument that is used to measure an aspect of weather

a) Name the instrument and aspect of weather it measures (2 marks)

Name: _____

Aspect of weather: _____

b) Explain why the instrument is sunk into the ground and the top of funnel left 30cm above the ground level. (2 marks)

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15. State one way in which each of the following is adapted to its habitat (4 marks)

a) Cactus

_____

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b) Water lily

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c) Camel

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d) Fish

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