



EXAMINATIONS COUNCIL OF ESWATINI
Eswatini Primary Certificate

Science

513/02

PAPER2

2019

MARK SCHEME

{513/02}

MARKS: 60

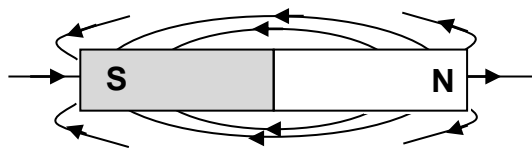
- 1 (a) (i) radicle;
- (ii) seed 1 monocotyledon; A monocote
seed 2 dicotyledon; A dicote [2]
- (iii) plant 1 plant 2
has one cotyledon has two cotyledons [1]
- (iv) moisture;
oxygen;
suitable temperature; any two [2]

- (b) (i) E nucleus;
F cytoplasm; [2]
- (ii) B/ cell wall;
C/ (sap) vacuole;
D/ chloroplast; any two [2]

- 2 (a) (i) static;
current; [2]
- (ii) reference to rubbing/ demonstration of friction;
appropriate materials/ surfaces; e.g. rubbing ruler on jersey/hair, rod or plastic ruler on hair; [2]

- (b) (potential) chemical; →
electrical → sound; [2]

- (c) (i) at least two correctly curved lines on each pole;
correct direction of arrow heads (away from North, towards South pole);



- (ii) circled metal spoon;
nail; [2]

- 3 (a) J; [1]
G; [1]

- (b) (i) dissolving; [1]
- (ii) sugar – solute;
mixture- solution; [2]

- (c) sorting/pick seeds with hand/ ;

use magnet;
 to pick fine pieces of iron;
 I ref. sand left alone [3]

(d) K melting wax;
 L flame; [2]

4 (a) (i) one/ 1; [1]
 (ii) incisors ;
 cuts grass;
 (pre) molars;
 grind/ chew; [max. 3]

[1]

(b) cut into small pieces;
 mixed with saliva;
 lubricated (to be easily swallowed);
 tongue rolls food into bolus/ small ball; [max. 3]

(c) Table 4.1

Part of alimentary canal	Function
anus	absorption of water
rectum	stores faeces temporarily
small intestines	passage of faeces
large intestines	absorption of the end products

[3]

5 (a) (i) ability to do work; [1]
 (ii) sun; stars; fire; lightning; [max. 2]
 R moon

(b) (i) ray is a line of light that is smaller than a beam/ ORA; [1]
 (ii) mixture of different colours;
 red, orange, yellow, green, blue, violet and indigo/ any 3 named; [2]

A colours of the rainbow

(c) (i) wind is not used-up (when generating electricity)/ it can be re-used; [1]
 (ii) water/ sun/ ; [1]
 (iii) use energy saving bulbs/ switch off lights when not in use/ boil the amount of water required for use/AW; [1]
 (iv) energy can neither be created nor destroyed; [1]

6 (a) tie stone with thread;
 fill displacement can with water;

(gently) lower stone into can;
collect water into beaker;
pour water into measuring cylinder;
volume of water collected = volume of stone;

Guidance: steps 1 and 2 are interchangeable

[max. 5]

OR

tie stone with thread;
partly fill measuring cylinder with water + read volume;
(gently) lower stone into measuring cylinder;
read new volume of water;
subtract first volume from second;
difference = volume of stone;

[max. 5]

- (b) (i)** litmus paper or solution; [1]
- (ii)** **O** : red/ orange/ yellow;
P : blue/ indigo/ purple/ violet/ mauve; [2]
- (iii)** use of universal indicator;
green (colour formed); [2]
- 7 (a) (i)** (soft) iron; [1]
- (ii)** core becomes a magnet;
pins attracted to the nail/ core; [2]
- (iii)** increase the number of cells;
Increase the number of turns (in the coil); [2]
- (b) (i)** to provide heat/boil the solution; [1]
- (ii)** distillate; [1]
- (iii)** to condense the (water) vapour;
to liquid; [2]
- (iv)** correct label in the kettle; [1]

