

YEAR 7 SCIENCE EXAMINATION

SEMESTER 1, 2017

MULTIPLE CHOICE -PART A AND SHORT ANSWERS – PART B



**KINROSS
COLLEGE**

Believe · Act · Achieve

STUDENT NAME:
TEACHER NAME:
DATE:

TIME ALLOWED FOR THIS EXAM: (PART A and PART B)

Reading time **before** commencing work: 10 minutes

Working time for this paper: 1 hour 50 minutes

MATERIAL REQUIRED / RECOMMENDED FOR THIS PAPER:

To be provided by the supervisor:

- This question and answer booklet

To be provided by the candidate:

- Pens, pencils, eraser and ruler

IMPORTANT NOTE TO CANDIDATES:

No other items may be taken into the examination room.

It is your responsibility to ensure that you do not have any unauthorised notes or other items of a non-personal nature in the examination room. If you have any unauthorised material with you, hand it to the supervisor **BEFORE** reading any further. All iPads and mobile phones must be turned off and in your bag along with any other devices and notes. Bags are to be closed and placed under the desk.

INSTRUCTION TO CANDIDATES:

1. **Read** through both papers to familiarise yourself with all the questions.
2. Use a **blue or black** ballpoint / ink pen for written answers. Use pencil for drawing the graph.
3. **Write** your answers in the booklets.
4. Should you require more space than you have been given please use **the spare sheet** (at the back of this booklet) and ensure that you include your name and the question / statement to which you are responding.

AT THE END OF THE EXAMINATION:

- Any planning sheets or other pieces of paper **MUST** be handed in with this booklet.
- make sure that your name is on your booklet and any other pieces of paper used.

PART A: MULTIPLE CHOICE.

Choose AND CIRCLE the LETTER that best fits the statement or question.

1. The definition of the term 'resource' is:

- (a) The building blocks of all living things
- (b) Materials made by man
- (c) Anything supplied by Earth to satisfy a particular need of humans or other living things
- (d) A material supplied to Earth to improve its quality (1 mark)

2. The definition of a 'Renewable Resource' is:

- (a) A resource which can be recycled
- (b) A resource that can be used over and over again without being used up
- (c) A resource that cannot be replaced as it is reused
- (d) A resource that is natural (1 mark)

3. Which of the following is an example of a non-renewable resource?

- (a) Sunlight
- (b) Air
- (c) Fossil Fuels
- (d) Water (1 mark)

4. Which of the following is NOT a step in the Water Cycle?

- (a) Weathering
- (b) Precipitation
- (c) Run off
- (d) Evaporation (1 mark)

5. When water melts it changes from:

- (a) a liquid to a solid
- (b) a solid to a gas
- (c) a solid to a liquid
- (d) a gas to a liquid (1 mark)

6. The main components of soil are:

- (a) Sediment
- (b) Living things
- (c) Dissolved gases and minerals
- (d) All of the above (1 mark)

7. Humus is a term used when referring to:

- (a) Dirt
- (b) Dissolved minerals
- (c) Bacteria
- (d) Decaying wastes and dead organisms (1 mark)

8. Some households recycle grey water, this means:

- (a) Sewerage water is used to water the garden
- (b) Waste water from baths, showers and washing machines are used to water the garden
- (c) Grey water from the hose is used to water the garden
- (d) Water is collected in a rainwater tank and used for showers (1 mark)

9. Hydroelectric energy is best described as:

- (a) Converting hydrogen gas to fuel for power stations
- (b) Using moving water to generate electricity
- (c) Converting water into clean fuels
- (d) Generating electricity by converting water into hydrogen (1 mark)

10. The boiling point of water occurs at what temperature?

- (a) 0 °C
- (b) 273 °C
- (c) 100 °C
- (d) 10 °C (1 mark)

11. Which of the following lists contains only non-renewable resources?

- (a) uranium, coal and oil
 - (b) coal, oil and water
 - (c) bamboo, oil and uranium
 - (d) bamboo, water and coal
- (1 mark)

12. El Nino weather patterns can cause which of the following to happen in Australia

- (a) Tsunamis
 - (b) Droughts
 - (c) Flooding
 - (d) Earthquakes
- (1 mark)

13. How often do El Nino events occur on average?

- (a) Every 20 000 years
 - (b) Every 12 -18 months
 - (c) Every 4 – 7 years
 - (d) Twice every century
- (1 mark)

14. Industrial factories release carbon dioxide into the atmosphere, this can contribute towards global warming. Which of the following is not caused by global warming?

- (a) Increased evaporation of water from lakes and reservoirs
 - (b) Increased melting of Polar ice caps
 - (c) Holes in the ozone layer
 - (d) Flooding and droughts
- (1 mark)

15. Desalination plants turn salt water into fresh water for drinking. What process do they use?

- (a) Flocculation
 - (b) Distillation
 - (c) Sedimentation
 - (d) Condensation
- (1 mark)

CHEMISTRY AND SCIENCE TOOLKIT

16. There are four main branches of science. They are:

- (a) biology, physics, chemistry and geography.
- (b) biology, history, chemistry and earth and space.
- (c) biology, physics, geography and history.
- (d) biology, physics, chemistry and earth and space. (1 mark)

17. Which one of the following is NOT safe behaviour in a scientific laboratory?

- (a) Washing your hands after every experiment
- (b) Keeping your books and other paper away from chemicals and flames
- (c) Wearing safety glasses whenever mixing or heating chemicals
- (d) Drinking from glassware and laboratory taps (1 mark)

18. A scientist that studies ancient life and fossils is called a:

- (a) volcanologist.
- (b) fossilologist.
- (c) palaeontologist.
- (d) geophysicist. (1 mark)

19. In the laboratory DO NOT:

- (a) run or push others roughly.
- (b) wash your hands after experiments.
- (c) tie long hair back.
- (d) keep workbooks away from heating equipment or flames. [1 mark]

20. Meteorologists are scientists who study:

- (a) the atmosphere and weather patterns.
- (b) living things and how living things interact with their environment.
- (c) different forms of energy and forces.
- (d) planet Earth and how it changes over time. [1 mark]

21. When sugar dissolves in water, the water is known as the:

- (a) solute.
- (b) solvent.
- (c) solution.
- (d) suspension.

[1 mark]

22. Two students have a mixture of salt, sand and iron filings that they need to separate. The correct sequence of steps for the process is:

- (a) add water, filtration, evaporation, magnetic separation.
- (b) magnetic separation, add water, filtration, evaporation.
- (c) add water, evaporation, filtration, magnetic separation.
- (d) add water, magnetic separation, filtration, evaporation.

[1 mark]

23. After distillation, the products:

- (a) are easily collected.
- (b) are condensed back to a liquid by cooling.
- (c) still need further separation.
- (d) are returned back to a liquid by further heating.

[1 mark]

24. Chromatography separates mixtures based on differences in their:

- (a) magnetism.
- (b) boiling points.
- (c) mass.
- (d) solubility.

[1 mark]

25. Sugar dissolves easily in water; therefore, sugar is said to be:

- (a) insoluble.
- (b) soluble.
- (c) insolvent.
- (d) a solution.

[1 mark]

Name: _____

Yr 7 Science Exam Multiple Choice Answer Sheet

Circle the letter indicating the *best* answer.

1	A	B	C	D
2	A	B	C	D
3	A	B	C	D
4	A	B	C	D
5	A	B	C	D
6	A	B	C	D
7	A	B	C	D
8	A	B	C	D
9	A	B	C	D
10	A	B	C	D
11	A	B	C	D
12	A	B	C	D
13	A	B	C	D
14	A	B	C	D
15	A	B	C	D
16	A	B	C	D
17	A	B	C	D
18	A	B	C	D
19	A	B	C	D
20	A	B	C	D
21	A	B	C	D
22	A	B	C	D
23	A	B	C	D
24	A	B	C	D
25	A	B	C	D

END OF PART A

COMMENCE PART B (SHORT ANSWERS)

PART B: SHORT ANSWER

1. Classify the following resources as Non-renewable or Renewable, by placing a tick in the correct column. (5 Marks)

Resource	Non-renewable	Renewable
Gum trees		
Water		
gas		
Sheep		
oil		

2. When there is a large volcanic eruption, dust and ash can block out sunlight.

a) What would this do to the amount of water that evaporates as part of the water the cycle?

_____ (1 mark)

b) Why would this happen?

_____ (1 mark)

c) What would happen to the amount of rain that would fall in countries close to the volcano?

_____ (1 mark)

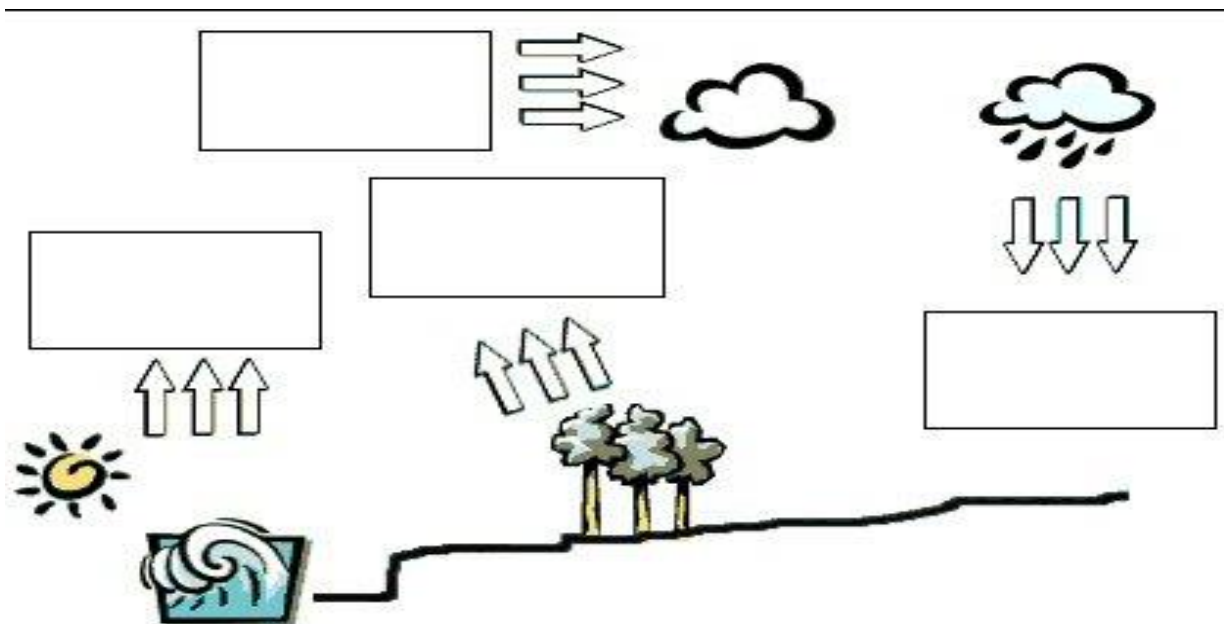
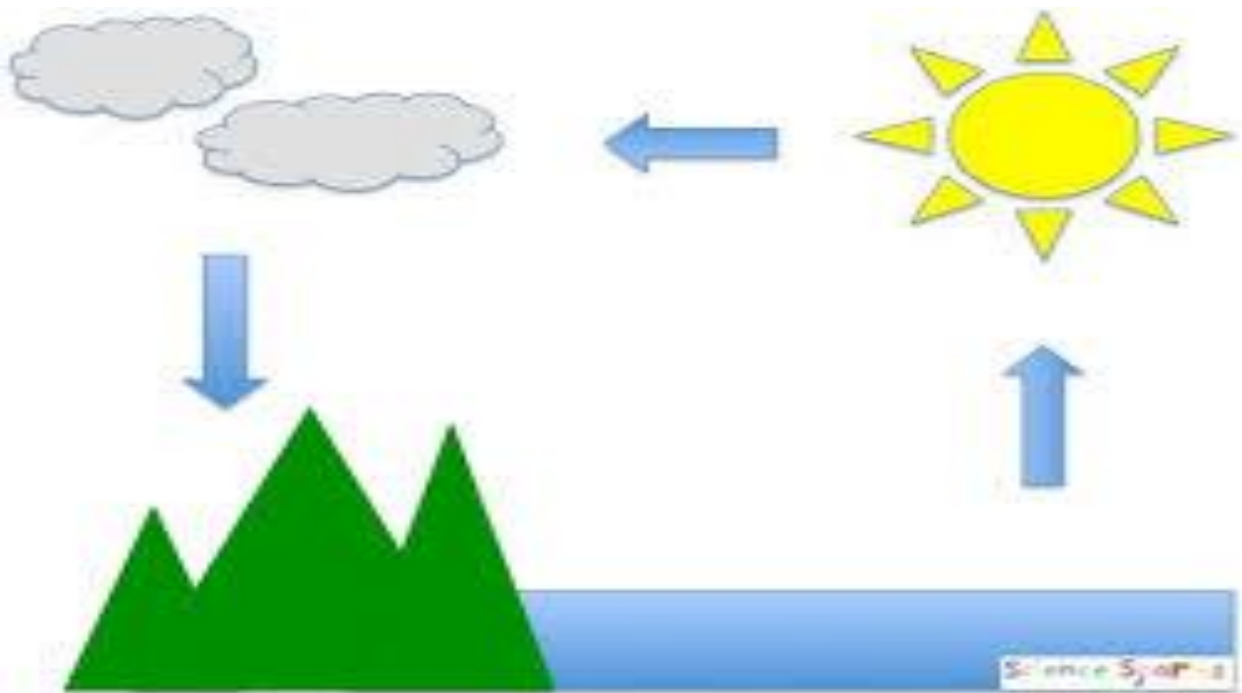
d) Why would this happen?

_____ (2 marks)

3. Fill in the boxes using the following processes to complete the diagram:

transpiration condensation evaporation precipitation

(4 marks)



4. List 3 things you can do at home to reduce the amount of water you use:

(3 marks)

5. Why is it important for scientists to design cars that can travel large distances without using much fuel?

(3 marks)

6. Miss Cooper's Year 7 class conducted a survey on students who recycled. The results table below shows the number of males and females who recycle from three science classes:

Classes	Number of males who recycle	Number of females who recycle
Mr. Majekodunmi	16	16
Mr. Fitz	6	21
Mr. Alexander	17	13

(a) Construct an appropriate graph below to compare the 3 classes (5 marks)

A large grid for drawing a bar chart. The grid is 20 units wide and 15 units high. The first two columns are shaded light blue, representing the number of males and females respectively. The remaining 18 columns are white, representing the three classes: Mr. Majekodunmi, Mr. Fitz, and Mr. Alexander.

(b) Using the graph you created, identify which class had the highest number of females who recycled (1 Mark)

(c) Using the graph results, write a conclusion about recycling (2 marks)



8. Name 5 pieces of scientific equipment being used in the above image.

(5 marks)

9. Provide an example of a solution that is separated by evaporation and identify the property that is used to separate the substance.

(2 marks)



10. Identify two pieces of safety equipment or clothing and explain how they protect you when conducting a scientific experiment.

(4 marks)

11. What is the difference between a pure substance and a mixture? Give an example of each.

(4 marks)

12. How does centrifuging separate a mixture? By which property does centrifuging separate the substances?

(3 marks)



Making a cup of tea with a tea bag and hot water is an example of filtration.

13. Explain how filtration works using tea bags as an example. Identify the components that are the filter, the filtrate and residue.

(4 marks)

14. Chromatography is the technique used to separate the different coloured inks which have been mixed to create black ink. How can this technique be used to identify the ink used to write a ransom note?

(6 marks)

END OF PART B

END OF EXAMINATION