

YEAR 8 SCIENCE
EXAMINATION - SEMESTER 2, 2015



**KINROSS
COLLEGE**
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MULTIPLE CHOICE BOOKLET 1

STUDENT'S NAME:
TEACHER'S NAME:
DATE:

TIME ALLOWED FOR THIS EXAM: (Book 1 and Book 2 combined)

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 graphs or labeling diagrams.
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.
- At the end of the examination make sure that your name is on your booklet and any other pieces of paper used.

Do not turn the page over until you are asked to do so

Circle the answer that best fits the statement question.

EARTH SCIENCE (15 marks):

1. The Rock Cycle can explain:

- a) How a sedimentary rock can become metamorphic
- b) How a metamorphic rock can become sedimentary
- c) How all rocks can become igneous
- d) All of the above

2. A seismic survey works by:

- a) Setting an explosive charge in the rocks and collecting the rocks blasted out.
- b) Drilling out a core of rock and chemically testing it for mineral content.
- c) Creating a shock wave in the rock and seeing how much it makes the ground shake.
- d) Sending a shock wave into the Earth and watching for how it reflects off rock layers below.

3. We know about the structure of the Earth because:

- a) The presence of volcanoes
- b) The study of rocks
- c) The study of seismic waves from Earthquakes
- d) All of the above

4. Which of the following is an igneous rock?

- a) Pumice
- b) Diamond
- c) Limestone
- d) Marble

5. Which of the following is a sedimentary rock?

- a) Pumice
- b) Diamond
- c) Limestone
- d) Marble

6. Which of the following is a metamorphic rock?

- a) Pumice
- b) Marble
- c) Limestone
- d) Granite

7. Where are the oldest layers of rock usually found in a cliff made from sedimentary rock?

- a) At the top
- b) In the middle
- c) At the bottom
- d) At the top and in the middle

8. Which type of rock often contains fossils?

- a) Sedimentary
- b) Igneous
- c) Metamorphic

d) All of them will contain fossils

9. The first type of rock to form in the Earth's crust was most likely:

- a) sedimentary.
- b) metamorphic.
- c) igneous.
- d) clastic sedimentary.

10. Rock that forms from the cooling of magma or lava:

- a) Metamorphic rock.
- b) Igneous rock.
- c) Sedimentary rock.
- d) Volcanic rock.

11. What two factors does a metamorphic rock need to form?

- a) Weathering and erosion
- b) Heat and pressure
- c) Cooling and solidification
- d) Crystallisation and evaporation

12. Rock that forms from the cementing of deposited particles are called:

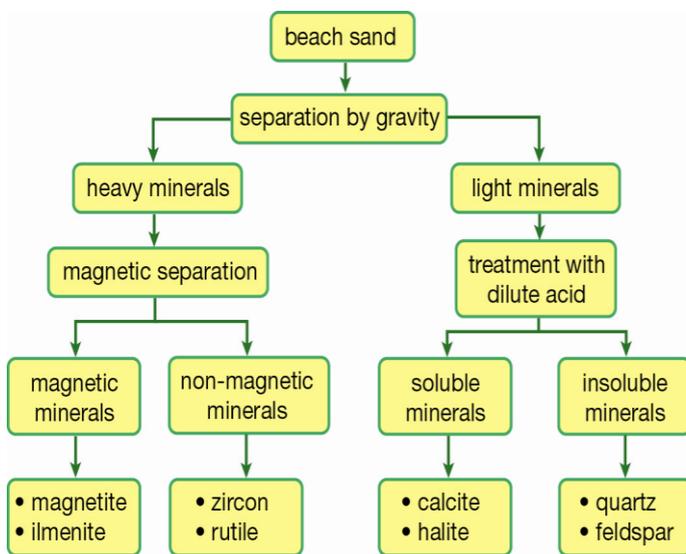
- a) metamorphic rock.
- b) igneous rock.
- c) sedimentary rock.
- d) volcanic rock.

13. The two most common processes that change a pile of sediment into a sedimentary rock are:

- a) compaction and cementation.
- b) weathering and erosion.
- c) deposition and sedimentation.
- d) cooling and crystallisation.

Information for Questions 14 and 15

The flow chart below shows the processes (in a simplified way) used to separate valuable minerals from beach sand. Study it carefully before answering the following questions.



14 Identify the properties of ilmenite based on the key.

- a heavy, magnetic material
- found in beach sand and can be separated from other minerals by using a magnet
- a magnetic material soluble in dilute acid
- a beach sand that is heavy and that does not react with acid

15 Identify a likely mining method used with these mineral sands.

- open cut
- underground
- dredging
- adits

PHYSICS (15 marks):

16. Kinetic energy is also known as

- Heat energy
- Movement energy
- Stored energy
- Light energy

17. Thermal energy is also known as

- Heat energy
- Movement energy
- Stored energy
- Light energy

18. Potential energy is also known as

- Heat energy
- Movement energy
- Stored energy
- Light energy

19. Four vehicles are travelling at the same speed. Which has the least kinetic energy?

- A bike
- A car
- A bus
- road train

20. A car weighing 943kg has the least kinetic energy at

- a) 30km/h
- b) 50km/h
- c) 70km/h
- d) 90km/h

21. Which of the following is not a form of energy?

- a) Nuclear
- b) Elastic
- c) Friction
- d) Kinetic

22. Four balls are positioned 10m above the ground. Which has the least gravitational potential energy?

- a) Ping pong ball
- b) Golf ball
- c) Cricket ball
- d) Bowling ball

23. An astronaut weighs less on the moon because the moon has

- a) Weaker gravity
- b) Thinner atmosphere
- c) Colder temperature
- d) Softer surface

24. Reactions that always give out heat are called

- a) Exothermic
- b) Electrochemical
- c) Endothermic
- d) Geothermal

25. Reactions that always take in heat are called

- a) Exothermic
- b) Electrochemical
- c) Endothermic
- d) Geothermal

26. Elastic potential energy is found in

- a) Uranium
- b) Batteries
- c) Rubber Bands
- d) Sunlight

27. An archer shoots an arrow from a bow. The useful energy change as he releases the arrow is

- a) Elastic → kinetic
- b) Kinetic → elastic
- c) Chemical → gravitational
- d) Gravitational → sound

28. If an appliance converts most of the energy going in into the energy we want coming out, we say it is

- a) Useful
- b) Effective
- c) Efficient
- d) Energetic

29. Which of the following will not affect how much gravitational potential energy an object has?

- a) Height above the ground
- b) Mass of the object
- c) Force of gravity
- d) Wind resistance

30. Energy

- a) Can be created, but not destroyed.
- b) Cannot be created or destroyed.
- c) Can be created and destroyed
- d) Cannot be created, but can be destroyed

END OF QUESTION PAPER