

YEAR 10 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 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.
- 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 this page until you are asked to do so.

Circle the answer that best fits the statement or questions below

1. Which is the best description of a solar system?
 - a. Planets and rocks that orbit a large planet
 - b. Planets and rocks that orbit a single sun
 - c. Stars and planets that orbit a galaxy
 - d. Satellites and planets that orbit Earth

2. Mars is similar to Earth in many ways. What features do they have in common?
 - a. They are the same size and have the same gravity
 - b. Mars has an atmosphere, polar caps and a rocky surface
 - c. They both have an atmosphere that could support human life
 - d. Mars has an atmosphere and oceans

3. Life as we know it has possibly only evolved on Earth because
 - a. The atmosphere contains only nitrogen and is mild
 - b. There are quantities of nitrogen, oxygen and salty water for life
 - c. Earth's atmosphere is composed of only oxygen and carbon dioxide
 - d. It has oxygen, water and moderate temperatures

4. Ancient cultures each believed that the universe was created in a specific way. Which culture believed that the Rainbow Serpent created the universe?
 - a. The Greeks
 - b. The Romans
 - c. Indigenous Australians
 - d. The Incas

5. The big bang theory is
 - a. A model that demonstrates a steady state universe
 - b. A model that demonstrates that the universe oscillates
 - c. A theory reinforced by images of the universes earliest moments
 - d. A theory to explain the beginning of the universe

6. The big bang is thought to have occurred how many years ago?
 - a. 13 thousand
 - b. 13 million
 - c. 13 billion
 - d. 13 trillion

7. Which statement about waves is true?
 - a. Long waves have high frequency
 - b. Short waves have high frequency
 - c. Low frequency waves are most dangerous
 - d. Low frequency waves penetrate lead

8. As a jet plane flies towards you, the noise of its engine changes from
 - a. A higher pitch to a lower pitch
 - b. A lower pitch to a higher pitch
 - c. It depends what direction you are facing
 - d. It depends on the type of engine

9. As a star moves rapidly away from Earth, the light from it becomes
 - a. More red
 - b. More blue
 - c. It depends on the direction you are facing
 - d. It depends on the type of star.

10. In Australia the summer solstice is on the
 - a. 21st of March
 - b. 21st of June
 - c. 21st of September
 - d. 21st of December

11. Which term best matches the following definition – “gradual change over a long period of time”
 - a. Natural selection
 - b. Adaptation
 - c. Evolution
 - d. Variation

12. Which term best matches the following definition – “features or characteristics that make an organism better suited to its environment”
 - a. Natural selection
 - b. Adaptation
 - c. Evolution
 - d. Variation

13. Which term best matches the following definition – “differences between individuals of the same species”
 - a. Natural selection
 - b. Adaptation
 - c. Evolution
 - d. Variation

14. Which term best matches the following definition – “the increased likelihood of an individual to survive to reproductive age, due to a survival advantage”
 - a. Natural selection
 - b. Adaptation
 - c. Evolution
 - d. Variation

15. Many desert animals are nocturnal – they are active at night and sleep in the day.
This is most likely to be an adaptation to
- Avoid predators
 - Catch prey
 - Attract a mate
 - Avoid the heat of the sun
16. Organisms belong to the same species if
- They live in the same place
 - They can reproduce
 - They can reproduce to produce fertile offspring
 - They have evolved.
17. Charles Darwin based his theory of evolution on studies of wildlife in the Galapagos Islands. His ideas mostly came from studies of which 2 animals?
- Iguanas and ducks
 - Turtles and mice
 - Pigeons and dogs
 - Tortoises and finches
18. Wolves and antelope are very different species of mammal, but are believed to have evolved from the same common ancestor. This is an example of
- Convergent evolution
 - Divergent evolution
 - Transform evolution
 - Parallel evolution
19. Any variation that makes an individual better suited to their environment is described as a
- Positive variation
 - Survival advantage
 - Survival variation
 - Positive advantage
20. What statement about evolution is true?
- It has been proved by scientific observations
 - It has been disproved by scientific observations
 - It is a scientific theory based on evidence
 - It is only believed in by a small minority of scientists

END OF BOOKLET ONE

PROCEED TO BOOKLET TWO