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Natural Sciences & Technology Olympiad
GRADE 5

DATE: 27 AUGUST 2025

TIME: 90 MINUTES

INSTRUCTIONS:

1. This booklet has 50 multiple-choice questions.
2. Use the answer sheet provided.

   Circle the letter corresponding to your answer.
3. Each question carries 1 mark.
4. You have 90 minutes for the paper which works out to an average of 1.8 minutes per question.
5. Read the questions carefully before answering.

ENJOY THE OLYMPIAD.

Grade Five Natural Sciences and Technology Olympiad 2025

Indicate the correct answer by circling the correct letter on the answer sheet provided.

1. Which of the following is NOT a living organism? (1)
   A) Coal
   B) Plant
   C) Grass
   D) Bird

2. Coal can be classified as a… (1)
   A) Burning thing
   B) Renewable energy resource
   C) Non-renewable energy resource
   D) Nuclear Power

3. This type of energy comes directly from the sun (1)
   A) Thermal energy
   B) Mechanical energy
   C) Solar energy
   D) Nuclear energy

4. What causes air pollution? (1)
   A) Increased plant growth
   B) Clean air
   C) Burning fossil fuels
   D) Decreased ocean levels

5. Why do most people prefer to use a gas stove when cooking? (1)
   A) Works during power cuts
   B) Saves energy
   C) Easy to control
   D) All of the above

6. Which of the following is **NOT** a property of matter? (1)
   A) Volume
   B) Mass
   C) Space
   D) Light

7. Which one is an example of evaporation? (1)
   A) Ice cream melting
   B) Clothes drying on the line
   C) Droplets on the window
   D) Droplets on the grass

8. If you have a metal spoon and a wooden spoon, which property of matter can you use to determine which one will heat up faster in hot soup? (1)
   A) Colour
   B) Hardness
   C) Conductivity
   D) Shape

9. When a solid phase changes to a gaseous phase the process is called… (1)
   A) Density
   B) Mass
   C) Deposition
   D) Sublimation

10. The boiling point of water equals to (1)
    A) Zero degrees Celsius
    B) Ten degrees Celsius
    C) One hundred degrees Celsius
    D) One thousand degrees Celsius

11. Which of the following is **NOT** a common method used to preserve food? (1)
    A) Freezing
    B) Cooking
    C) Frying
    D) Salting

12. _____ helps conserve natural resources. (1)
    A) Collecting materials
    B) Using materials
    C) Making materials
    D) Recycling materials

13. Carbon Dioxide is the gas required by… (1)
    A) Humans
    B) Snails
    C) Lizards
    D) Plants

14. Imagine you would like to start a garden in your school. If your school is in a hot climate zone, it might be a good idea to… (1)
    A) Choose exotic plants
    B) Choose heat-loving plants
    C) Choose any plants you like
    D) Choose water-loving plants

15. Who discovered the science behind forces? (1)
    A) Isaac Newton
    B) Capt. Refilwe Moreetsi
    C) Capt. Londy Ngcobo
    D) Hans Lippershey

16. _____ is a fine powder that plants produce when they reproduce. (1)
    A) Pollen
    B) Germination
    C) Seed
    D) Sunlight washing powder

17. The _____ provides nutrients for plants so that they can be well grown. (1)
    A) Outdoor watering
    B) Organic matter
    C) Leaves
    D) Branches

18. If you wanted to improve the quality of your garden soil, which of the following should you **NOT** add? (1)
    A) Peels of fruit and vegetables
    B) Organic compost
    C) Manure
    D) Pesticides

19. Which layer of soil is most fertile and why? (1)
    A) Topsoil, because it has the most organic matter
    B) Subsoil, because it is deeper
    C) Bedrock, because it is the hardest
    D) Surface layer, because it has the most sunlight

20. Which is **NOT** an example of a natural light source? (1)
    A) A star
    B) A comet
    C) A torch
    D) Lightning

21. Which of the following are **NOT** examples of artificial light sources? (1)
    A) Light bulbs and candles
    B) Neon light and fire
    C) Electrical torches and lightning
    D) The sun and lightning

22. What is the correct statement about mirrors? (1)
    A) Mirrors create light
    B) Mirrors show the exact image
    C) Mirrors show a reflection
    D) Mirrors attract lighting

23. A _____ is an area of darkness formed when an object blocks light from a light source. (1)
    A) Shelter
    B) Opaque
    C) Shadow
    D) Rock

24. A star or a huge ball of burning gas is… (1)
    A) Coal
    B) Lamp
    C) Sun
    D) Moon

25. _____ are big lumps of ice that travel to the outer reaches of the solar system at the end of their orbit. (1)
A) Planets
B) Comets
C) Craters
D) Meteorids

26. Which of the following is a type of rock? (1)
A) Plastic
B) Sandstone
C) Water
D) Eraser

27. Why is granite used for building? (1)
A) It is very soft
B) It is very strong
C) It is very light
D) It is very shiny

28. A _____ is an area of the sky that contains a group of stars which form a pattern when see from the Earth. (1)
A) Comet
B) Constellation
C) Concert
D) Concept

29. A _____ is a group of billions of stars held together by the force of gravity. (1)
A) Igneous
B) Sedimentary
C) Metamorphic
D) Galaxy

30. If a flower is scented, it means… (1)
A) It has a pleasant smell
B) It has a pleasant taste
C) It looks like a marble
D) It looks like a diamond

31. Which of these is a sedimentary rock? (1)
    A) Granite
    B) Rock
    C) Limestone
    D) Obsidian

32. What does interdependence mean? (1)
    A) Plants and animals are different
    B) Plants and animals are similar
    C) Plants and animals depend on each other in the ecosystem
    D) Plants and animals do **NOT** depend on each other in the ecosystem

33. Which groups of animals do **NOT** have a backbone? (1)
    A) Worms
    B) Fish
    C) Lizards
    D) Dogs

34. What is the function of a backbone in a human being's body? (1)
    A) To protect the brain
    B) To keep the body strong
    C) To protect the spinal cord
    D) To protect the head

35. If you wanted to explain to your friend what a food chain is, how would you explain it?
    Choose the correct explanation: (1)
    A) A food chain is a chain made of food like a string of sausages.
    B) It starts with plants (producers), then moves to animals that eat plants (herbivores), and then to animals that eat other animals (carnivores).
    C) A food chain is when animals cook food for each other.
    D) A food chain starts with a lion because lions eat everything.

36. Why are fossils important to scientists? (1)
    A) They make pretty decorations
    B) They help us understand past life on Earth
    C) They can be turned into fuel
    D) They change colour in the sun

37. If a scientist finds a dinosaur fossil in South Africa, what can it tell us about the area? (1)
    A) It used to be a desert
    B) Dinosaurs once lived there
    C) It had no plants or animals
    D) It was always underwater

38. What can the presence of many fossils in South Africa tell us about its ancient environment? (1)
    A) It was always icy
    B) It had diverse plant and animal life
    C) It never changed
    D) It was always dry

39. A _____ describes the stages and processes that take place as a plant or animal grows and develops. (1)
    A) Life Process
    B) Life Skills
    C) Life Cycle
    D) Life Sciences

40. What are the three main states of matter? (1)
    A) Solid, liquid, gas
    B) Cold, warm, hot
    C) Light, dark, shadow
    D) Big, medium, small

41. What happens to water when it boils? (1)
    A) It turns into steam and condenses
    B) It becomes a solid and a liquid
    C) It stays a liquid
    D) It disappears

42. If you heat a bar of chocolate, what phase change will occur? (1)
    A) Freezing
    B) Melting
    C) Condensing
    D) Sublimating

43. Why does a puddle of water on the ground disappear on a sunny day? (1)
    A) It sinks into the ground
    B) It evaporates into the air
    C) It freezes
    D) It turns into a solid

44. When a solid changes to a gas, that phase change is called… (1)
    A) Melting
    B) Boiling
    C) Sublimation
    D) Deposition

45. Which of the following describes the particles in a liquid state of matter? (1)
    A) Not so closely packed
    B) Fixed position
    C) Spread out and moving freely
    D) Arranged in a regular pattern

46. How does technology help people in South Africa? (1)
    A) By making communication faster
    B) By controlling the weather
    C) By creating more pollution
    D) By making animals extinct

47. If you want to turn water vapour back into a liquid, what process would you use? (1)
    A) Freezing
    B) Boiling
    C) Condensation
    D) Sublimation

48. What state of matter is steam? (1)
    A) Droplets
    B) Vaporisation
    C) Gas
    D) Liquid

49. A shadow is a dark area that forms when an object blocks light. (1)
    A) True
    B) False
    C) It depends
    D) Maybe

50. Technology is always something electronic. (1)
    A) True
    B) False
    C) It depends
    D) Maybe

TOTAL MARKS = 50