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Natural Sciences & Technology Olympiad
GRADE 4

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 each question carefully.

ENJOY THE OLYMPIAD.

Grade Four Natural Sciences and Technology Olympiad 2025

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

1. What is the main purpose of the leaves on a plant? (1)
   A) To absorb sunlight
   B) To anchor the plant and absorb water and nutrients from the soil
   C) To produce flowers
   D) To store water for the plant

2. Why are the branches important on a plant? (1)
   A) Branches help the plant move
   B) Branches make the plant look pretty
   C) Branches help the plant make food and breathe
   D) Branches transport water and nutrients

3. The grass _____ are bundled and thatched together to create a waterproof and insulating roof covering. (1)
   A) Roots
   B) Blades
   C) Stems
   D) Flowers

4. Compare and contrast **(i.e. similarities and differences)** the functions of a plant's roots and the stem. (1)
   A) Both roots and stems help the plant breathe
   B) Roots take in water and nutrients from the soil, while stems support the plant and transport water and nutrients
   C) Roots support the plant above the ground, while stems anchor the plant below the ground
   D) Roots produce flowers, while stems produce leaves

5. Which of the following statements best describes what the petal of the flower does? (1)
   A) The petal changes its shape every night
   B) The petal protects the reproductive parts of the flower
   C) The petal attracts or repels pollinators
   D) Both B & C are correct

6. What is the main function of a fish's scales? (1)
   A) To smell food in the water
   B) To shield the fish against predators and aids in locomotion
   C) To help fight other animals
   D) To store food for later

7. Why are flies attracted to dirt? (1)
   A) To help them fly higher
   B) To keep them warm
   C) To protect them from predators
   D) This is due to food sources and breeding grounds

8. What do frogs eat? (1)
   A) Rats and tadpoles
   B) Algae
   C) Flies, moths, and snails
   D) Insects, rats, and rabbits

9. Why is a pond a good place for the frog to live? (1)
   A) For reproduction and to keep moist
   B) It is murky
   C) Frogs like tasting watery food
   D) It has contaminants

10. These kinds of animals **do not** have a backbone… (1)
    A) Invertebrates
    B) Vertebrates
    C) Cat
    D) Horse

11. Which list includes only living things? (1)
    A) Dogs, fire, and worms
    B) Rocks, air, and rain
    C) Sand, darkness, and heat
    D) Plants, rats, and mosquitos

12. Why do most plants need the soil to grow? (1)
    A) Soil has water and nutrients necessary for the plant to grow
    B) Soil is the foundation of the plant
    C) Soil absorbs sunlight
    D) To absorb water and heat

13. If a plant is not growing well, what could be the problem? (1)
    A) It could be too much acidity
    B) It is getting too much sunlight
    C) It does not have enough water or sunlight
    D) All of the above

14. The smallest bone is found in the middle of the… (1)
    A) Cheek
    B) Ear
    C) Nose
    D) Elbow

15. A habitat is another name for the animal's… (1)
    A) Darkroom
    B) Home/Shelter
    C) Cage
    D) Nest

16. What state of matter is a sponge? (1)
    A) Solid
    B) Liquid
    C) Gas
    D) Plasma

17. Which statement best describes how the particles in a gas are arranged? (1)
    A) They vibrate
    B) They are spread out and move around quickly
    C) They are tightly packed and vibrate in place
    D) They have a definite shape or volume

18. The grass is usually wet early in the morning, and we cannot see the same water on the grass towards noon. What happens to water on the grass? (1)
    A) It freezes into ice
    B) It turns into plasma
    C) It stays as a liquid
    D) It disappears completely due to heat

19. What is heartburn? (1)
    A) A pain in your head
    B) A burning feeling in your chest
    C) A problem with your heart
    D) A cough

20. Which food is more likely to cause heartburn? (1)
    A) Milk
    B) Spicy food
    C) Water
    D) Fruits

21. What is the phase change called when water turns from a gas to a liquid? (1)
    A) Melting
    B) Freezing
    C) Condensation
    D) Evaporation

22. What is sweat mostly made of? (1)
    A) Running energy
    B) Water
    C) Deodorant
    D) Perfume

23. How does sweat cool your body? (1)
    A) It turns into a solid
    B) It melts and turns into water
    C) It dries up and evaporates from the skin
    D) It remains sticky on the skin

24. Insecticide poison kills mostly insects in the area. Which of the following animals would be least affected? (1)
    A) Kangaroo
    B) Lizard
    C) Spider
    D) Bird

25. What are the causes of pollution in the environment? (1)
    A) Dumping litter everywhere
    B) Not cleaning public spaces regularly
    C) Oil leaks sometimes get to the animals' stomachs and poison them
    D) All of the above.

26. What is the chemical formula for water? (1)
    A) H2O2
    B) H2O
    C) CO2O
    D) CO2

27. Coins are usually made from… (1)
    A) Water
    B) Oil
    C) Non-metals
    D) Metals

28. Planets _____ are often called the 'Blue Planet' (1)
    A) Saturn
    B) Earth&Neptune
    C) Jupiter
    D) Venus

29. What device do we use to communicate with people who are far away from us? (1)
    A) Appliance
    B) Cell phone
    C) Microphone
    D) Telescope

30. Which of the following is an example of a natural water source? (1)
    A) A water bottle
    B) A swimming pool
    C) A bathing pool
    D) None of the above

31. Which energy comes from the movement of air? (1)
    A) Wind energy
    B) Solar energy
    C) Fossil fuel energy
    D) Nuclear energy

32. When you want to turn the lights on you will have to use a… (1)
    A) Power
    B) Plug
    C) Switch
    D) Socket

33. When you play, what type of energy do you use? (1)
    A) Light energy
    B) Sound energy
    C) Electrical energy
    D) Kinetic energy

34. Which types of energy do you use when you are making toasted bread? (1)
    A) Potential energy and sound energy
    B) Kinetic energy and potential energy
    C) Solar energy and heat energy
    D) Electrical energy and heat energy

35. Which of the following shows energy being used to make something move? (1)
    A) A fan spinning
    B) A cup
    C) A book sitting on a shelf
    D) A tree

36. Which of the following best describes odour? (1)
A) Something we see
B) Something we taste
C) Something we hear
D) Something we smell

37. Which activity uses water the most? (1)
A) Handwashing
B) Taking showers
C) Outdoor watering
D) Drinking and cooking

38. Which of these uses forces to move? (1)
A) A rock
B) Buildings
C) Beaker
D) A ball rolling

39. An example of an artificial light is… (1)
A) Lightning
B) A torch
C) A star
D) Forest fire

40. Which of these objects makes the lightest sound? (1)
A) A feather falling
B) A rubber ball bouncing
C) A drum being hit with a stick
D) A flower blooming

41. What is an example of a star? (1)
A) A planet
B) The sun
C) The moon
D) A comet

42. Solar energy is important for Earth. (1)
Choose an option below that does **NOT** support the statement above:
A) It keeps us warm and gives us light.
B) It is a renewable source of energy
C) It controls the tides in the oceans
D) It helps us see at night

43. Hydro means…? (1)
A) Warmth
B) Water
C) War
D) Warrior

44. _____ is the flow of electrons. (1)
A) Current
B) Courage
C) Power
D) Energy

45. Which of the following statements best describes a lactose-intolerant person? (1)
A) Can not tolerate red meat
B) Can not digest/tolerate food such as dairy
C) Can tolerate dairy
D) Can only drink milk

46. What is a carnivore? (1)
A) Animals that drink milk
B) Animals that eat meat only
C) Animals that eat herbs/grass only
D) Animals that both grass and meat

47. An explosion of the star is called…? (1)
A) Superpower
B) Super magic
C) Superman
D) Supernova

48. Which of the following is **NOT** a characteristic of the moon? (1)
    A) It is a natural satellite
    B) It is made up of craters
    C) It has its own light
    D) It is liquid like substance

49. Doctors can see broken bones through… (1)
    A) Computer
    B) Binoculars
    C) Goggles
    D) X-rays

50. A material like plastic allows light to pass through it because it is…? (1)
    A) Light
    B) Transparent
    C) Opaque
    D) Bending

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TOTAL MARKS = 50