

Republic of the Philippines
Department of Education
REGION IV-A (CALABARZON)
DIVISION OF BATANGAS
DISTRICT OF LIPA CITY
LIPA CITY NATIONAL HIGH SCHOOL
Grade 10 SCIENCE
SECOND QUARTER SUMMATIVE TEST
S.Y. 2024-2025

Name: _____ **Date:** October 14, 2025

Section: _____ **Score:** _____ / 100

I. MULTIPLE CHOICE

Directions: Read each question carefully. Write the letter of the correct answer on the space provided before each number.

- _____ 1. Which of the following is the powerhouse of the cell?
- A. Nucleus
 - B. Mitochondria
 - C. Ribosome
 - D. Chloroplast
- _____ 2. What is the process by which plants make their own food?
- A. Respiration
 - B. Fermentation
 - C. Photosynthesis
 - D. Digestion
- _____ 3. Which element has the atomic number 6?
- A. Oxygen
 - B. Nitrogen
 - C. Carbon
 - D. Hydrogen
- _____ 4. What type of force opposes motion between two surfaces?
- A. Tension
 - B. Friction
 - C. Gravity
 - D. Normal force
- _____ 5. Which of the following is a renewable source of energy?
- A. Coal
 - B. Natural Gas
 - C. Solar Energy
 - D. Petroleum

- _____ 6. What is the basic unit of life?
- A. Tissue
 - B. Organ
 - C. Cell
 - D. Organism
- _____ 7. Which planet is known as the Red Planet?
- A. Venus
 - B. Mars
 - C. Jupiter
 - D. Saturn
- _____ 8. What is the chemical formula for water?
- A . H , O
 - B . C O ,
 - C . O ,
 - D . H , O ,
- _____ 9. Which organ is responsible for pumping blood throughout the body?
- A. Lungs
 - B. Brain
 - C. Heart
 - D. Liver
- _____ 10. What is the SI unit of force?
- A. Joule
 - B. Newton
 - C. Watt
 - D. Pascal

II. TRUE OR FALSE

Directions: Write TRUE if the statement is correct and FALSE if it is incorrect. Write your answer on the space provided before each number.

- _____ 11. The Earth revolves around the Sun.
- _____ 12. Water boils at 50°C at sea level.
- _____ 13. All metals are good conductors of electricity.
- _____ 14. Photosynthesis occurs only at night.
- _____ 15. The human body has 206 bones.
- _____ 16. Acids have a pH greater than 7.
- _____ 17. Speed and velocity are the same concepts.
- _____ 18. The process of changing liquid to gas is called evaporation.
- _____ 19. Neurons are cells found in the nervous system.
- _____ 20. Oxygen is the most abundant gas in Earth's atmosphere.

III. MATCHING TYPE

Directions: Match Column A with Column B. Write the letter of the correct answer on the space provided before each number.

Column A

- _____ 21. Chloroplast
- _____ 22. Nucleus
- _____ 23. Mitochondria
- _____ 24. Ribosome
- _____ 25. Cell membrane

Column B

- A. Controls cell activities
- B. Site of photosynthesis
- C. Produces energy (ATP)
- D. Protein synthesis
- E. Regulates what enters and exits the cell
- F. Stores water and nutrients

IV. IDENTIFICATION

Directions: Identify what is being asked in each statement. Write your answer on the space provided.

- 26. It is the ability to do work.
- 27. The process of breaking down food into simpler substances.
- 28. The measure of the amount of matter in an object.
- 29. The bending of light as it passes from one medium to another.
- 30. The largest organ of the human body.

V. FILL IN THE BLANKS

Directions: Complete each sentence by filling in the blank with the correct word or phrase from the box.

Word Bank:

ecosystem photosynthesis respiration adaptation habitat
biodiversity conservation population

- 31. The variety of life in a particular habitat is called _____.
- 32. A _____ is a community of living organisms interacting with their environment.
- 33. The natural home of an organism is known as its _____.
- 34. An _____ is a trait that helps an organism survive in its environment.
- 35. The process of protecting natural resources is called _____.

VI. MODIFIED TRUE OR FALSE

Directions: Write TRUE if the statement is correct. If FALSE, underline the word(s) that make the statement incorrect and write the correct word(s) above it.

- _____ 36. Plants release carbon dioxide during photosynthesis.
- _____ 37. The smallest particle of an element is called a molecule.

- _____ 38. Acceleration is the rate of change of displacement.
- _____ 39. The nervous system is responsible for circulating blood.
- _____ 40. A lunar eclipse occurs when the Earth passes between the Sun and Moon.

VII. SEQUENCING

Directions: Arrange the following steps in the correct order. Write numbers 1-5, with 1 being the first step.

41. Steps in the Scientific Method:

- _____ Draw conclusions
- _____ Formulate a hypothesis
- _____ Identify the problem
- _____ Conduct experiments
- _____ Analyze data

VIII. ENUMERATION

Directions: List down what is being asked in each item.

42. Give at least 3 examples of renewable energy sources:

- a. _____
- b. _____
- c. _____

43. List 4 states of matter:

- a. _____
- b. _____
- c. _____
- d. _____

44. Name 3 types of simple machines:

- a. _____
- b. _____
- c. _____

IX. LABELING/DIAGRAM

Directions: Label the parts of the diagram. Write your answers on the lines provided.

45. Parts of a Plant Cell (Label the following parts):

[DIAGRAM SPACE]

(Note: Draw or paste the diagram here, then label the parts)

1. _____ (Cell wall)
2. _____ (Cell membrane)
3. _____ (Nucleus)
4. _____ (Chloroplast)
5. _____ (Vacuole)
6. _____ (Mitochondria)
7. _____ (Cytoplasm)

X. SHORT ANSWER

Directions: Answer the following questions briefly and concisely. Write your answer in 2-3 sentences.

46. Explain the difference between renewable and non-renewable resources.

47. Why is biodiversity important to ecosystems?

48. How does the greenhouse effect contribute to global warming?

XI. COMPLETION TYPE

Directions: Complete the statements by writing the appropriate word or phrase on the blank.

49. The process by which organisms with favorable traits survive and reproduce is called _____.
50. The force that pulls objects toward the center of the Earth is _____.
51. The study of living organisms and their interactions with the environment is called _____.

XII. CROSSWORD PUZZLE

Directions: Complete the crossword puzzle using the clues provided. Write one letter per box.

ACROSS:

52. The center of an atom (7 letters)
54. A push or pull on an object (5 letters)
56. The energy of motion (7 letters)

DOWN:

53. Basic unit of life (4 letters)
55. Green pigment in plants (11 letters)
57. The path of planets around the sun (5 letters)

[CROSSWORD GRID]

(Note: Draw the crossword grid here)

XIII. ANALOGY

Directions: Complete the analogy by writing the correct word on the blank.

58. Heart : Circulatory :: Brain : _____
59. Photosynthesis : Oxygen :: Respiration : _____
60. Solid : Ice :: Gas : _____

XIV. CLASSIFICATION

Directions: Classify the following items by writing them under the correct category.

61. Classify the following as ELEMENT or COMPOUND:

Items:

Water (H, O)

Oxygen (O,)

Carbon (C)

Salt (NaCl)

Gold (Au)

ELEMENT

COMPOUND

XV. PROBLEM SOLVING

Directions: Solve the following problems. Show your complete solution. Box your final answer.

62. A car travels 150 kilometers in 3 hours. What is its average speed in km/h? (5 points)

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63. Calculate the density of a substance with a mass of 45 grams and a volume of 15 cm³. (5 points)

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XVI. ESSAY

Directions: Write a well-organized essay answering the question below. Your answer will be graded based on content, organization, and grammar.

[illegible]

"Maka-Diyos, Maka-Tao, Makakalikasan at Makabansa"