

2nd Semester Midterm Exam
Science SC21102 MEP M.1/9

Name: _____ Student no. _____ Class: M.1/9

Part 1. Multiple choices

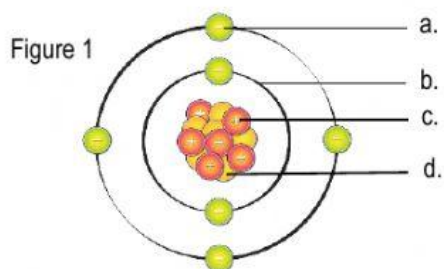
Instruction: Read each questions carefully and select the best answer.

Indicator 1: SC2.1 Gr1.8 Explain atomic structure which consists of protons, neutrons and electrons.(Items1-6)

1. It is define as the basic building blocks of all matter.

- | | |
|-------------|--------------|
| a. Elements | c. Atoms |
| b. Things | d. Molecules |

2. Figure 1 shows a model of an atom. Which is an electron?



3. Nucleus is consist of

- I. Electron
- II. Proton
- III. Neutron

- | | |
|------------------|--------------------|
| a. I only | c. II and III only |
| b. I and II only | d. I, II and III |

4. Which of the following is incorrect?

- | | |
|--|---|
| a. Proton is positively charge. | c. Neutron has the mass unit of 1 amu. |
| b. Electron is located in the nucleus. | d. An atom has three subatomic particles. |

5. An atom is neutral because it has ...

- | | |
|-------------------------------------|---|
| a. has fewer electrons that protons | c. the same number of protons and neutrons |
| b. has more electrons than protons | d. the same number of protons and electrons |

6. Which device is used to see atoms?

- a. Electron microscope
- b. Magnifying glass
- c. Telescope
- d. Microscope

Indicator 2: SC2.1 Gr1.7 Define elements using model and information.(Items 7-15)

7. _____ are pure substances that cannot be broken down into other simpler substances by physical or chemical means.

- a. Compounds
- b. Mixtures
- c. Elements
- d. Molecules

(Items 8-9)

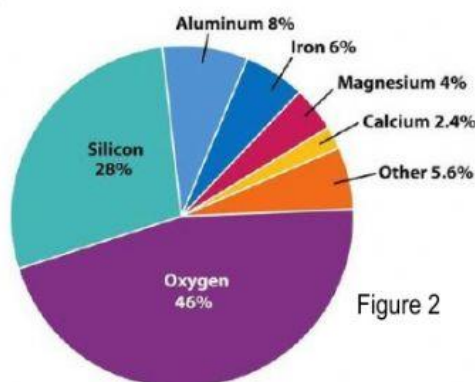


Figure 2

8. Figure 2 shows the abundance of Elements in the Earth. Which element is the most abundant?

- a. Iron
- b. Oxygen
- c. Silicon
- d. Calcium

9. From Figure 2, arrange the order of elements from least to greatest.

- a. Oxygen, Silicon, Aluminum
- b. Iron, Calcium, Silicon
- c. Calcium, Magnesium, others
- d. Magnesium, Oxygen, Iron

10. Which is an element?

- a. Carbon dioxide
- b. Water
- c. Salt
- d. Oxygen gas

11. Which element has a wrong symbol?

- a. Potassium (K)
- b. Sodium (S)
- c. Carbon (C)
- d. Oxygen (O)

12. Which of the following statements is not true about elements?

- a. Elements are in the forms of solid and liquid only.
- b. Elements can be atoms or molecules.
- c. Copper is an element because it contains only copper atoms.
- d. Nitrogen gas is an element as it has molecules made up of nitrogen atoms.

13. Which of the following are the advantages of having a periodic table?

I. It enables scientist to analyze the properties of elements more systematically.

II. It enables the scientist to predict the properties of elements and their compounds based on their position on the table.

III. It enables the study of elements to become easier.

- a. III only
- b. I and II only
- c. II and III only
- d. I, II and III

14. Which of the following statements is in correct?

- a. Technetium, promethium and astatine are elements made from the laboratory.
- b. Oxygen, nitrogen and carbon are naturally occurred elements.
- c. At present, there are 181 elements discovered.
- d. Elements are given names and symbols.

15. Which elements has the symbol Au?

- a. Argon
- b. Gold
- c. Silver
- d. Mercury

Indicator 3: SC2.1 Gr1.1 Explain the physical properties of metals, non-metals, metalloids.(Items 16-24)

Items 16-18

Properties of different elements

Element	Appearance	Melting point	Boiling point	Density (g/cm ³)	Conduct electricity	Conduct heat
Hydrogen	Gas	-259	-253	0.000082	No	No
Oxygen	Gas	-218	-183	0.0014	No	No
Carbon	Solid, black	3550	3825	2.26	Yes	No
Sodium	Solid, shiny	97.80	883	0.968	Yes	Yes
Silicon	Solid	1414	3265	2.33	Slightly	Yes
Mercury	Liquid, silvery-white	-38.89	356.73	13.53	Yes	Yes

16. From the table above, which element has the highest density?

- a. Mercury
- b. Hydrogen
- c. Silicon
- d. Carbon

17. Which element is metal?

- a. Oxygen
- b. Sodium
- c. Carbon
- d. Mercury

18. Which elements are good conductor of electricity?

I. Oxygen

II. Hydrogen

III. Mercury

IV. Carbon

- a. I and II only
- b. II and III only
- c. III and IV only
- d. I, II, III and IV

19. Which of the following is the property of metals?

- a. Brittle
- b. Ductile
- c. Dull
- d. Poor heat conductor

20. Which of the following are metalloids?

- a. Chlorine, hydrogen, aluminum
- b. Neon, oxygen, iron
- c. Lithium, sodium, arsenic
- d. Boron, silicon, germanium

21. Why are metalloids useful as semiconductor?
- a. They can conduct electricity better at certain condition.
 - b. They have both the metallic and non-metallic properties.
 - c. They are located between metals and non-metals in the Periodic Table.
 - d. They are brittle.
22. Which of the following is not true about metals?
- a. Metals are usually shiny.
 - b. Metals are malleable and ductile.
 - c. Metals are poor conductor of heat and electricity.
 - d. Metals are solid at room temperature.
23. Non-metals exist in solid, liquid and gaseous states. Which of the following are non-metals?
- a. Silicon, boron, oxygen
 - b. Nitrogen, chlorine, silver
 - c. Carbon, bromine, hydrogen
 - d. Iron, aluminum, copper
24. Which of the following statement best describe non-metals?
- a. They have high melting and boiling point
 - b. They have the properties of metals and non-metals.
 - c. They are solid and shiny.
 - d. They do not conduct heat and electricity.

Indicator 4. SC2.1 Gr1.9 Explain compounds and mixtures.(Items 25-28)

25. _____ are pure substances. They are formed when two or more elements combined chemically in a chemical reaction.
- a. Compounds
 - b. Materials
 - c. Periodic Table
 - d. Mixtures
26. Which of the following statements best describe compounds?
- a. The components in a compound can be separated by physical means.
 - b. A compound is made up of two or more chemically combined elements.
 - c. The smallest particles in compounds are matters.
 - d. A compound has no fixed composition of its elements.

27. Which of the followings are good example of mixtures?

- a. Water
- b. Salt
- c. Carbon dioxide
- d. Air

28. Rust is consist of which elements?

- a. Hydrogen and oxygen
- b. Magnesium and oxygen
- c. Iron and oxygen
- d. Carbon and oxygen

Part 2. Writing

Indicator 2: SC2.1 Gr1.7 Define elements and compounds using model and information.(Items 29-34)

Instruction: Complete the table about the names of elements and compounds.

Symbol of element	Name of element
Ex. H	<u>Hydrogen</u>
Na	29. _____
Cu	30. _____
Fe	31. _____

Chemical formula	Common name
H ₂ O	32. _____
NaCl	33. _____
CO ₂	34. _____

(สำหรับรายการ 35-40. วาดและตอบไดอะแกรมในสมุดบันทึกวิทยาศาสตร์ของคุณ)

Indicator 3: SC2.1 Gr1.1 Explain the physical properties of metals, non-metals, metalloids.

(Items 35-40)

Instruction: Complete the diagram for the uses of metals, non-metals and metalloids.

