



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

Name: \_\_\_\_\_ Student no. \_\_\_\_\_ Class: M.1/9

Part 1. Multiple choices

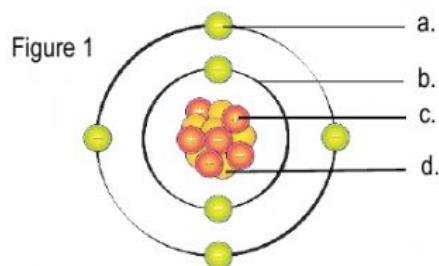
Instruction: Read each questions carefully and select the best answer.

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)

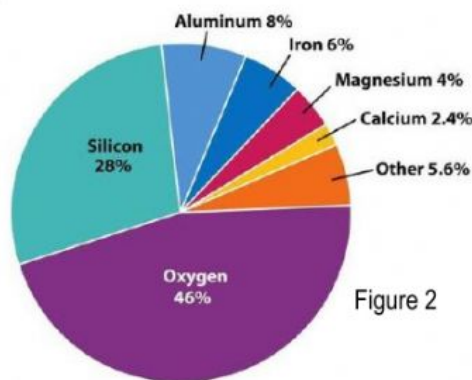


Figure 2

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      | c. II and III only |
| b. I and II 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 | c. Silver  |
| b. Gold  | 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 <sup>3</sup> )	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 <sub>2</sub> O	32. _____
NaCl	33. _____
CO <sub>2</sub>	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.

