

SUBJECT: SCIENCE

Contents:

Unit 8. Chemical reactions

- ✓ 8.3. Reactions of metals with oxygen (p.276-281)
- ✓ 8.4. Reactions of metals with water (p.282-285)
- ✓ 8.5. Reactions of metals with dilute acids (p.286-290)

Unit 9. Magnetism

- ✓ 9.1. Magnetic fields (p.293-299)

Instructions:

- 1) Students **MUST** complete the study guide before revision classes.
- 2) Students are **ALLOWED** to use calculators for problem-solving tasks.

PART 1. SCIENTIFIC TERMS

NO.	TERMS	UNITS	DEFINITIONS	VIETNAMESE TRANSLATIONS
1	reactive	8.3		
2	prevent	8.3		
3	inert	8.3		
4	rust	8.3		
5	collapse	8.3		
6	reactivity	8.4		
7	sandpaper	8.4		
8	react vigorously	8.4		
9	reagents	8.5		
10	salt	8.5		
11	dilute acid	8.5		
12	magnetism	9.1		
13	magnet	9.1		
14	magnetic	9.1		
15	magnetic field	9.1		

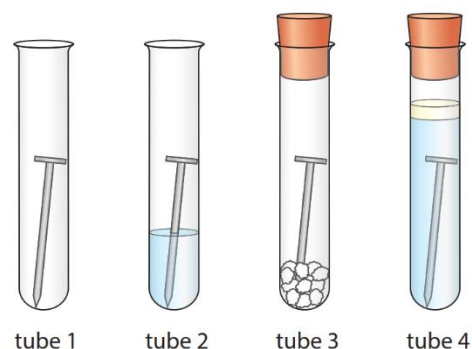
16	magnetic field lines	9.1		
17	compass	9.1		
18	repel	9.1		
19	attract	9.1		
20	like poles	9.1		

PART 2. EXERCISES

Exercise 1. Analyse and interpret the following experiment.

A new iron nail is placed in each of four test tubes.

- Tube 1 contains nothing.
- Tube 2 contains water, and the nail is in the water.
- Tube 3 has calcium chloride in the bottom. The calcium chloride can help to absorb water in the air.
- Tube 4 has water that has been boiled. On top of the boiled water is a layer of oil.



1. Is the air in tube 3 dry? Why?

2. What is the layer of oil in tube 4 used for?

3. Which conditions would prevent the iron from rusting?

4. In which test tube would the nail rust most quickly? Why?

5. Suggest two ways to protect the iron from rusting.

Exercise 2. Complete the following chemical reactions by writing the appropriate reactants or products.

6. sodium + water \rightarrow _____ + _____

7. _____ + water \rightarrow potassium hydroxide + _____

8. calcium + water \rightarrow _____ + hydrogen

9. _____ + hydrochloric acid \rightarrow magnesium chloride + hydrogen

10. zinc + hydrochloric acid \rightarrow _____ + _____

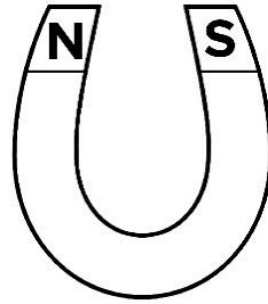
11. sodium + _____ \rightarrow sodium sulphate + hydrogen

Exercise 3. Draw magnetic field lines.

12.



13.



14.



15.

