

## Chapter 1 : SPM Form 5 Chemistry

*www.nxgvision.com www.nxgvision.com 1 Short Notes: Form 5 Chemistry Rate or Reaction Calculation Rate of Reaction (Average Rate).*

Replication that rapidly kills the host cell causing it to lyse or burst. Phage attaches to cell membrane of host. Nuclei acid DNA of virus injected into host cell. New viral parts are combined to make new phages. Enzymes weaken and destroy the cell membrane causing it to lyse releasing new viruses to infect other cells. Growth of microorganisms can be manipulated by controlling: Enzyme system system are made available according to their genetic code. Microbes also differ in their needs for free oxygen. Organisms grow with or without oxygen. Necessary for microbes to grow, but microbes cannot grow in pure water. A measurement of the availability of water is  $a_w$  or water activity. Microorganisms can grow in a wide range of temperature. Since they depend on water as a solvent for nutrients, frozen water or boiling water inhibits their growth. The nature of a solution based on its acidity or alkalinity is described as the pH of the solution. The pH scale ranges from 0 which is strongly acidic to 14 which is a strong alkali. Ultraviolet light presence of chemical inhibitors also affect the growth of organisms. Chemicals such as hydrogen peroxide and chlorine kill microbes. Characteristic growth patterns can be illustrated on a graph. Normal growth curve which is referred to as the logarithmic growth phase or log phase. The roles of useful microorganisms. Saprophytic fungi and saprophytic bacteria decompose organic substances into humus that contains simple minerals for plant growth.

**Chapter 2 : Koleksi Nota Kimia Tingkatan 5 (SPM) / Form 5 Chemistry Notes - Bumi Gemilang**

*Short Note Chemistry Form 5-Chapter 2 Carbon Compounds. Uploaded by. salamah\_sabri. Uploaded by. fiena Short Note Chemistry Form 5-Chapter 5 Chemical for Consumer.*

Zygote is formed as a result of fertilization between an ovum and a sperm. During sexual intercourse, about million sperms will be ejaculated into the vagina in the form of semen. Through the vagina, the sperms move into the uterus and towards the Fallopian tube. When the sperms reach the Fallopian tube, there are only a few hundred of sperms left. Of all the sperms that managed to move towards the secondary oocyte, only one sperm will fertilise the secondary oocyte. In the Fallopian tube, the first sperm that reaches the secondary oocyte will penetrate into the egg membrane with its head. Upon entry of the sperm, the secondary oocyte is stimulated to undergo meiosis II. An ovum and a polar body are formed. The nucleus of the sperm then fuses with the nucleus of ovum to form a zygote. This process is called fertilization. The middle piece and the tail of the sperm will be left behind outside the ovum. The newly fertilized ovum zygote will form a fertilization membrane around itself so that other sperms will not be able to penetrate it. After fertilization, the zygote moves down the Fallopian tube and attaches to the uterine wall. The zygote takes about 3 to 4 days to reach the uterus. As the zygote moves down the Fallopian tube, it divides repeatedly through mitosis to form a blastocyst. The blastocyst consists of an outer layer of cells and an inner cell mass. About seven days after fertilization, the blastocyst is fully formed and attached itself to the endometrium of uterus and is embedded in it. This process is called implanantion. During implanantion, the outer layer of blastocyst attaches to the endometrium using its extended projections called trophoblast villi. The villi secrete enzymes to dissolve the cells in the uterine wall, forming a cavity that allows the blastocyst to be embedded into the wall. The villi with rich supply of blood capillaries extend into the endometrium to implant the blastocyst. In the endometrium, the inner cell mass in the blastocyst will develop to form the embryo. The villi from the embryonic tissues and the cells of the uterine wall will form the placenta. The embryo will develop to form a foetus within two months g. The foetus will then develop throughout the whole term and is then born as a baby. Both involve the fertilization of sperm with ovum. Both involve mitosis in the development of zygote. Two ova are fertilized by two separate sperms. The zygote divide after fertilization The zygote does not divide after fertilization Both foetus share one placenta Each foetus has its own placenta Both twins are of the same sex. Both twins may or may not be the same sex. Both twins look alike Both twins have some similar and some different characteristics as present among siblings. It is made of: During implanantion, trophoblast villi from the blastocyst are extended into the uterine wall to form placenta. Each villus has a network of blood capillaries that are separated from the mother. The placenta joined to foetus by umbilical cord. The function of placenta:

**Chapter 3 : Modul alkimia Ting. 5 | Cikgu Adura's Blog**

*Short Note Chemistry Form 5-Chapter 3 Oxidation and Reduction. Documents Similar To SPM Chemistry Form 5 Notes. Chemistry Form 5 Chapter 5 Note. Uploaded by.*

Let study about Kinetic Theory of Matter. Matter is anything that occupies space and has mass. Matter exists in three states which is solid, liquid and gas. Matter is made up of tiny and discrete particles. An ion is a positively-charged or negatively-charged particle. Particles in matter are in motion. Diffusion occurs when particles of a substance move in between the particles of another substance. Diffusion of matter occurs most rapidly in gases, slower in liquids and slowest in solids, due to the different arrangement and movement of particles in the three states of matter. The change in heat changes the state of matter. When a substance is heated, the particles gain kinetic energy and move faster. When a substance is cooled, the particles loss their kinetic energy and move slower. Moleculesgroup of two or more atoms held together by chemical bonds. Usually form from covalent bond. Ion An ion is an atom or molecule in which the total number of electrons is not equal to the total number of protons, giving it positive or negative. Usually form from ionic bond. Solid So what is a solid? Solids are usually hard because their molecules have been packed together. The closer your molecules are, the harder you are. Solids also can hold their own shape. A rock will always look like a rock unless something happens to it. The same goes for a diamond. Even when you grind up a solid into a powder, you will see little tiny pieces of that solid under a microscope. Liquids will move and fill up any container. Solids like their shape. In the same way that a solid holds its shape, the atoms inside of a solid are not allowed to move around too much. This is one of the physical characteristics of solids. Atoms and molecules in liquids and gases are bouncing and floating around, free to move where they want. The molecules in a solid are stuck. The atoms still spin and the electrons fly around, but the entire atom will not change position. Liquid The second state of matter we will discuss is a liquid. Solids are hard things you can hold. Gases are floating around you and in bubbles. What is a liquid? Water is a liquid. Your blood is a liquid. Liquids are an in-between state of matter. They can be found in between the solid and gas states. If you have a variety of materials in a liquid, it is called a solution. One characteristic of a liquid is that it will fill up the shape of a container. If you pour some water in a cup, it will fill up the bottom of the cup first and then fill the rest. The water will also take the shape of the cup. It fills the bottom first because of gravity. The top part of a liquid will usually have a flat surface. That flat surface is because of gravity too. Another trait of liquids is that they are difficult to compress. When you compress something, you take a certain amount and force it into a smaller space. Solids are very difficult to compress and gases are very easy. Liquids are in the middle but tend to be difficult. When you compress something, you force the atoms closer together. When pressure go up, substances are compressed. Liquids already have their atoms close together, so they are hard to compress. Many shock absorbers in cars compress liquids in tubes. A special force keeps liquids together. Solids are stuck together and you have to force them apart. Gases bounce everywhere and they try to spread themselves out. Liquids actually want to stick together. There will always be the occasional evaporation where extra energy gets a molecule excited and the molecule leaves the system. Overall, liquids have cohesive sticky forces at work that hold the molecules together. Gas Gas is everywhere. There is something called the atmosphere. Gases are random groups of atoms. In solids, atoms and molecules are compact and close together. Liquids have atoms a little more spread out. However, gases are really spread out and the atoms and molecules are full of energy. They are bouncing around constantly. Gases can fill a container of any size or shape. That is one of their physical characteristics. Think about a balloon. No matter what shape you make the balloon it will be evenly filled with the gas atoms. The atoms and molecules are spread equally throughout the entire balloon. Liquids can only fill the bottom of the container while gases can fill it entirely. You might hear the term vapor. Vapor and gas mean the same thing. The word vapor is used to describe gases that are usually found as liquids. Good examples are water or mercury Hg. Compounds like carbon dioxide are usually gases at room temperature so scientists will rarely talk about carbon dioxide vapor. Water and mercury are liquids at room temperature so they get the vapor title. Gases hold huge amounts of energy, and their molecules are

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spread out as much as possible. With very little pressure, when compared to liquids and solids, those molecules can be compressed. It happens all of the time. Combinations of pressure and decreasing temperature force gases into tubes that we use every day. The kinetic theory of matter State of Matter.

### Chapter 4 : EduMission: CHEMISTRY SPM

*Form 5 Chemistry Notes - Ms. R. Buttigieg Pg. 20 Topic 2 - Organic Chemistry Organic Chemistry is the chemistry of compounds, which are found in living things or are.*

### Chapter 5 : Chemistry Notes

*Chapter 2 chemistry notes. ~ Some chemical symbols come from their Latin or Greek name such as Na for Sodium (natrium) or K for Potassium (Kalium).*

### Chapter 6 : SPM Chemistry Form 5 Notes " Terminology and Concepts: Carbon Compounds (Part 2)

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### Chapter 7 : www.nxgvision.com - Chemistry - Notes and Handouts

*No notes for slide. Chapter 5 Chemical Bonds 1. Chapter 5 Chemical Bonds 2. Formation of Chemical Bonds " Types of chemical bonds: 1. Chapter 1 chemistry form 4.*

### Chapter 8 : SPM Form 5 Chemistry Chapter 3 - Electromagnetism | SPM Physics Form 4/Form 5 Revision

*CHEMISTRY NOTES - Chapter 5 Atomic Structure and the Periodic Table Goals: To gain an understanding of: 1. Atoms and their structure. 2. The development of the atomic theory.*

### Chapter 9 : Chemistry Form 4 Notes " Chapter 2: Atomic Structure[matter] ~ BLOG [KIMIA] CIKGU IRW

*Chapter 2 Notes - Atoms, Molecules and Ions. The Early History. Refer to the Chemistry History Timeline for this chapter. "When two elements form a series.*