

PHYSIOLOGY.

1. What do you understand by the terms *Life* and *Death*? Distinguish between the different kinds of death; and state what may be considered as the "immediate cause" of death to the individual.
2. Give a short description of the connections and structure of the heart.
3. Write a note on the chemical composition of muscle.
4. Give an explanation of squinting. Explain the principle of the stereoscope.
5. State the disadvantages of a purely nitrogenous diet; show the economy and advantages of a mixed diet.
6. State the effects of "overtaking the emotions" upon mental stability.

(Candidates are at liberty, as per Syllabus of Examination, to write on such two of the three subjects given below as they may choose. No credit will be given to papers on all subjects from the same candidate.)

CHEMISTRY.

1. Give the source, mode of preparation and properties of Hs N.
2. Describe the process of *distillation*. For what purpose is it used in Chemistry?
3. What is the composition of Borax? From what sources is it obtained?
4. Give symbol and atomic weight of Silicon. How is Silicic Chloride obtained? What is the composition of each of the varieties of glass?
5. Give the chief properties of the metal Mercury. Name the chief *Salts* of this metal with formula of each.
6. What is the composition of the following substances? *White Lead, Bleaching Powder, Oil of Vitriol, Washing Soda, Red Lead, Lamp black, Condy's fluid, and Alum.*

NATURAL PHILOSOPHY.

1. Explain the meaning of the words *Composition* and *Resolution* of Forces and show how forces may be compounded and resolved. Resolve the force 12 into two forces, making angles of 45° with the given force on either side of it.
2. Investigate the requisites of a good balance. Prove that the true weight of a substance, when successively weighed in two ends of a *false* balance, is equal to the square root of the product of the two apparent weights.
3. Describe the Siphon, and explain its action. Explain the methods of determining the specific gravity (1) of a liquid, (2) of a gas.
4. Give a sketch and explain the principles of action of the *forcing pump*. Describe the *diving-bell*.
5. Define Ray, Pencil, Focus of Light, Angle of Incidence, Angle of Reflection, Angle of Refraction and define the principal focus of a mirror. Find the position of the principal focus: (1) for a concave spherical mirror, (2) for a convex spherical mirror.
6. What is meant by the limiting angle of total Reflection.

FRENCH.

Translate into English:

Pour moi, je vous l'avoue, je ne repais un peu de gloire. Les applaudissements me touchent; et je tiens que, dans tous les beaux-arts, c'est un supplice assez fâcheux que de se produire à des sots, que d'essayer, sur des compositions, la barbarie d'un stupide. Il y a plaisir, ne m'en parlez point, à travailler pour des personnes qui soient capables de sentir les délicatesses d'un art; qui sachent faire un doux accueil aux beautés d'un ouvrage, et par des chatouillantes approbations, vous régaler de votre travail. Oui, la récompense la plus agréable qu'on puisse recevoir des choses que l'on fait, c'est de les voir connues, de les voir caressées d'un applaudissement qui vous honore. Il n'y a rien, à mon avis, qui nous paye mieux que cela de toutes nos fatigues; et se sont des douceurs exquisés que des louanges éclairées.

Je fais voir pour une personne toute l'ardeur et toute la tendresse qu'on peut imaginer; je l'aime rien au monde qu'elle, et je n'ai qu'elle dans l'esprit; elle fait tous mes soins, tous mes desirs, toute ma joie; je ne parle que d'elle, je ne pense qu'à elle, je ne fais des songes que d'elle, je ne respire que par elle, mon cœur vit tout en elle; et voilà de tant d'amitié la digne récompense! Je suis deux jours sans la voir, qui sont pour moi deux siècles effroyables; je la rencontre par hasard; mon cœur, à cette vue, se sent tout transporté, ma joie éclate sur mon visage, je vole avec ravissement vers elle; et l'inattendu détourne de moi ces regards, et passe brusquement, comme si de sa vie elle ne m'avait vu!

1. Give the correct rendering of the title of the play, "*Le Bourgeois Gentilhomme*."
2. Account for the subjunctives *soient*, *sachent* and *puisse*, and explain the forms *connues* and *caressées*.
3. Write a note on the uses of *qui* and *que* as relatives.
4. Give the principal verbs that require no preposition in French before the infinitive which follows them.
5. Distinguish between the uses of, *avant*, *devant*; *au'our*, *alentour*, *auparavant*; *plus*, *davantage*; *savoir*, *connaître*; *sortir*, *partir*, *rêve*, *songe*.

Translate into French:

Cyrus was considered the Father of his people, but the present king is their tyrant and oppressor. He knew what to do and how to do it. The tiger is more to be feared than the lion. My friend will be here in half an hour, and stay with me for one hour and a half. She could understand and speak nine languages. Are you sure this man is more than forty? Certainly, I know he is more than fifty. I am taller than my brother by three inches. The man walked five hundred miles in one month. Have you heard the bell? What is the matter with you? The English people maintain their liberty. Will you be so kind as to lend me your carriage? Will it be fine to-morrow? Send for the man who did it. No, I am sorry to say she is worse.

It is twenty minutes to twelve now. If you do not attend to what I say, I shall punish you.

LATIN COMPOSITION.

Translate into Latin:

1. He taught the boys rhetoric at Corinth, logic at Athens.
2. In the Consulship of Cicero, Cataline and several (*compluresque*) other nobles, who were overwhelmed with debt, conspired to overthrow the republic; but their plans were frustrated by the vigilance of the consul, who drove Cataline out of the city, and caused (*effect ut*) those who remained behind to be arrested and strangled in prison.
3. I shall return to Rome on the 22nd of April.
4. He promised to leave the city and never to return.
5. He cried out that he was prepared to shed his blood for his country.

GREEK COMPOSITION.

Translate into Greek:

1. The Greeks wondered what it was that had happened.
2. All day they saw the sea itself and many ships.
3. The time which has been given (part.) to us is brief.
4. The general, having seen the enemies approaching, deposited all the booty among (eis) the Thracians.
5. If, therefore, you think that it is so, you are at liberty to sail away for the Peloponnesus.

ROMAN HISTORY.

1. Describe the constitution and functions of the different *Conitia*.
2. Give the dates of the three Punic Wars, and name the most distinguished Romans who took part in them.
3. Describe the First and Second Triumvirates.
4. When, and between whom, was the battle of Philippi fought, and with what results?
5. Mention and describe the chief political measures of Julius Cæsar.
6. "The Government of the Empire was not ostensibly monarchical." Explain.

GREEK HISTORY.

1. Write an account of "the Return of the Heracleidae," distinguishing between the historical and mythical elements of the legend.
2. State Wolfe's theory of the authorship of the Homeric poems, and discuss the validity of his arguments.
3. Mention in chronological order the chief Greek Historians and briefly describe their style and principal writings.
4. Describe the "Confederacy of Delos," and the part it played in Grecian history.
5. Give an account of the Sophists, particularly in their relation to the teaching of Socrates.