

CHEMISTRY.

1. What are Verdigris, Blue Vitriol, White Lead, Saltpetre, Epsom Salts? Explain their composition.
2. Give the source, symbol and atomic weight of Aluminium. Mention its principal compounds, and state what advantages it possesses over iron.
3. What is meant by Combustion, Igniting Point, Spontaneous Combustion? Describe Davy's Safety lamp and the Bunsen burner.
4. Mention and state the chief uses of the principal compounds of Ca found in nature. How is Hydrochloric acid prepared? Mention its chief properties. What are the general characters of the "metals of the alkalies?"
5. Write the formulae for the following compounds: Water, Ammonia Potassium Nitrate, Sodium Chloride, Calcium Oxide, Sulphuric Acid, Silica.
6. Classify the chief manures, and describe the effects of one of each class.

PHYSICS.

1. Give a definition of force. State fully what is meant by *molar* and *molecular* forces.
2. Name and give examples of the several kinds of attraction.
3. Describe the Barometer and explain its use.
4. State clearly what is meant by Specific Gravity. How do you find the S. G. of (1) a solid body which floats in water, (2) of a liquid.
5. Describe Joule's experiment to ascertain the "mechanical value of heat." Describe some methods of artificial cold.
6. What is the general principle of the electric telegraph. What is a sounder? Describe the relay and repeater.

FRENCH.

Translate into English:—

LE MAÎTRE DE MUSIQUE.—J'en demeure d'accord; et je les goûte comme vous. Il n'y a rien assurément qui chatouille davantage que les applaudissements que vous dites; mais cet encens ne fait pas vivre. Des louanges toutes pures ne mettent point un homme à son aise: il y faut mêler du solide; et la meilleure façon de louer c'est de louer avec les mains. C'est un homme, à la vérité, dont les lumières sont petites, qui parle à tort et à travers de toutes choses, et n'applaudit qu'à contre-sens; mais son argent redresse les jugements de son esprit; il a du discernement dans sa bourse; ses louanges sont monnayées; et ce bourgeois ignorant nous vaut mieux, comme vous voyez, que le grand seigneur éclairé qui nous a introduits ici.

LE MAÎTRE A DANSE.—Il y a quelque chose de vrai dans ce que vous dites; mais je trouve que vous appuyez un peu trop sur l'argent; et l'intérêt est quelque chose de si bas, qu'il ne faut jamais qu'un honnête homme montre pour lui de l'attachement.

MADAME JOURDAIN.—C'est une chose, moi, où je ne consentirai point. Les alliances avec plus grand qui soi sont sujettes toujours à de fâcheux inconvénients. Je ne veux point qu'un gendre puisse à ma fille reprocher ses parents, et qu'elle ait des enfants qui aient honte de m'appeler leur grand' maman. S'il fallait qu'elle me vint visiter en équipage de grand'dame, et qu'elle mauquât, par mégarde, à saluer quelqu'un du quartier, on ne manquerait pas aussitôt de dire sent sottises. "Voyez-vous, dirait-on, cette madame la marquise que fait tant la glorieuse? C'est la fille de monsieur Jourdain, qui était trop heureuse, étant petite, de jouer à la madame avec nous. Elle n'a pas toujours été si relevée que la voilà; et ses deux grands-pères vendaient du drap auprès de la porte Saint-Innocent. Ils ont amassé du bien à leurs enfants, qu'ils paient maintenant peut-être bien cher en l'autre monde; et l'on ne devient guère si riche à être honnêtes gens." Je ne veux point de tous ces caquets, et je veux un homme, en un mot, qui m'ait obligation de ma fille, et à qui je puisse dire: "Mettez-vous là, mon gendre et dînez avec moi."

1. Parse *dites, mellent, il faut, vaut, puisse, vint*.
2. Give the general rule for the formation of the feminine of adjectives and write the feminine of *bon, ancien, nouveau, vieux, doux*, and the masculine of *heureuse, fausse, fraîche, folle, neuve*.
3. Account for the *s* in *introduits* in first extract.
4. Give sentences illustrating the use of *en*, (1) as a pronoun, (2) a preposition, (3) an adverb.
5. Distinguish between *connaître* and *savoir*, and give principal parts of each.

Translate into French:

I shall answer his letter to-morrow. The wolf is the most cruel of all animals. Let us go to dinner. Do not meddle with other people's business. You have time to do this for me. I have burnt my finger. It occurred in the year one thousand

eight hundred and sixty-nine. I am very thirsty. A traveller walked one hundred and eighty miles in nine days. He knows his lesson wonderfully well. Sit down, gentlemen, here are some chairs. He has been struck by a bullet. My two letters are written. This child behaves very well. I live near the railway. I cannot come because I am not well. This tree was struck by lightning. The rainbows were beautiful. The cover of the book is green.

ENGLISH LITERATURE.

1. Give a general view of the literature of the reign of Queen Anne. Name the chief writers in prose and verse, and the principal works of each.
2. "History was raised into the rank of literature in the latter half of the eighteenth century, by three men." Expand this statement, and enumerate the chief historical writings of the present century.
3. Compare and contrast the poetry of Shelly and Keats.
4. Name the *dramatis personæ* of the play "Merchant of Venice," and state the part played by each.
5. Quote Portia's address before the Court, or her words to Bassanio beginning: "You see me, Lord Bassanio, where I stand."
6. Give the meaning of the following passages, and explain the allusions:

"And her sunny locks
Hang on her temples like a golden fleece;
Which makes her seat of Belmont Colchis' strand,
And many Jasons come in quest of her."

"But alas the while;
If Hercules and Lichas play at dice
Which is the better man, the greater throw
May turn by fortune from the weaker hand;
So is Alcides beaten by his page."

"In such a night,
Stood Dido with a willow in her hand
Upon the wild sea-banks, and waft her love
To come again to Carthage."

SECOND-CLASS LICENCES (Grade C).

GEOGRAPHY.

1. Name five inland bodies of salt water, and give your reasons for such waters being salt. Name the two great classes of rock and give their origin and characters.
2. What is a Cyclone? Whirlwind? Waterspout? What are the Monsoons? Name the Monsoon regions.
3. Name the Countries crossed by the Tropics of Cancer and Capricorn and by the Equator.
4. Locate and define the following:—Nubia, Crimea, Cologne, Rosario, Batavia, St. Helena, Vancouver, Balkash, Nicobar, Blanco, Biafra, Simcoe, Galway, Rio Grande.
5. Name the islands (1) of Nova Scotia, (2) of New Brunswick, (3) of Quebec, (4) of the Arctic Ocean.
6. Write a short description of the North Central States of the American Union. What Territories have been formed into States by Congress, during the present year?
7. Name and locate the capitals of Europe in the order of their size. Name the chief towns on the Danube.
8. Draw an outline Map of the Province of Ontario, with the chief towns filled in.

BRITISH HISTORY.

1. Write a note on the "Conquest and Settlement of Britain" by the Saxons.
2. Summarize the events of the reign of Edward III.
3. Explain the following terms as used in British history: Cabal, Roundhead, Nonjuror, Chartist, Jacobite, Interdict, Anti-corn-law League.
4. Describe the foreign policy of William III. and mention the most important legislative enactments of his reign.
5. Give a short sketch of the Indian Mutiny.
6. Mention the principal events in the reign of Queen Victoria from 1860 to the present time, and briefly describe any one of them.

BRITISH AMERICAN HISTORY.

1. Give a short account of the selection of the site and the founding of Montreal.
2. Describe briefly Phipp's expedition (1) against Port Royal, (2) against Quebec.