

4. What is the average pressure of the atmosphere in the metric notation, and in pounds to the square inch? How can the heights of mountains be measured by noting the air pressure?

5. If a stone, weighing 4.5 lbs. in air, weighs only 3.6 lbs. in water, what is its specific gravity? If it should float and displace 2.25 lbs. of water, what is the specific gravity?

6. How long will it take a 3-horse-power engine to raise 10 tons 50 feet high? Explain the difference between momentum and energy.

7. Describe an experiment which proves by a visible demonstration that sound is caused by the vibration of air.

8. Given the velocity of sound at 1125 feet per second, and the pitch of the musical note C, due to 132 vibrations per second; find the wave lengths in feet or inches of the air vibrations produced by each of the musical notes, C, D, E, F, G, A, B, and C.

9. Describe that portion of the ear through which the vibrations causing sound are impressed on the auditory nerves.

ENGLISH LITERATURE.

[Candidates who prefer may substitute for this paper that on French given below. If papers on both subjects are handed in by same candidate, no credit will be given for either.]

1. Name the chief dramatic writers of the reigns of Elizabeth and James II, with a short sketch of "early dramatic representation in England."

2. Describe and compare the poems of Cowper, Crabbe and Burns, and show their place in English literature.

3. Name the principal works of each of the following, distinguishing between prose and verse, and giving the subject matter of one in each division: Spenser, Milton, Tennyson, Robertson, Defoe, Byron, Johnson, Swift, Campbell, Blake, Ramsay, Scott, Chaucer.

4. Write a short account of the events in the First Act of Hamlet.

5. Quote Hamlet's soliloquy on Death, beginning "To be or not to be."

6. State by whom and on what occasion the following lines were uttered:

"O that this too, too solid flesh would melt,
Thaw, and resolve itself into a dew."

"That he is mad, 'tis true; 'tis true 'tis pity,
And pity 'tis 'tis true."

"For to the noble mind
Rich gifts wax poor when givers prove unkind."

"O, my offence is rank, it smells to heaven;
It hath the primal eldest curse upon it."

"O Hamlet, speak no more:

Thou turn'st mine eyes into my very soul,
And there I see such black and grained spots
As will not leave their tinct."

"Imperious Caesar, dead and turned to clay,
Might stop a hole to keep the wind away."

FRENCH.

Translate into English:—

Un grand événement est survenu dans ma vie. Au milieu de la route monotone que je parcourais tranquillement, et sans y penser, un carrefour vient tout à coup de s'ouvrir.

Deux chemins se présentent entre lesquels je dois choisir.

L'un n'est que la continuation de celui que j'ai suivi jusqu'à ce jour; l'autre, plus large, montre de merveilleuses perspectives; sur le premier, rien à craindre, mais aussi peu à espérer; sur l'autre, les grands périls et les opulentes réussites.

Il s'agit, en un mot, de savoir si j'abandonnerai le modeste bureau dans lequel je devais mourir pour une de ces entreprises hardies où le hasard seul est caissier.

C'est là sans doute ce qui me fait trouver tant de charmes à la collection que j'examine. Ces tasses grossièrement modelées par le sauvage m'initient à une partie de ses habitudes; ces vases d'une élégance confuse qu'a pétris l'Indien me révèlent l'intelligence amoindrie dans laquelle brille encore le crépuscule d'un soleil autrefois étincelant; ces crânes surchargés d'arabesques montrent la fantaisie arabe grossièrement traduite par l'ignorance espagnole! On trouve ici le cachet de chaque race, de chaque pays et de chaque siècle.

1. Account for the forms: *hardies*, *amoindrie*, *surchargées*, *traduite*.

2. Give the relative position of the personal pronouns in a sentence when used objectively, also of *en* and *y*.

3. When should *ce* instead of *il* be used as the subject of the verb *être*?

4. Give the principal parts of the following verbs: *parcourais*, *vient*, *dois*, *craindre*, *savoir*, *mourir*, *ouvrir*, *agit*, *fait*.

Translate into French:—

All these people have been very kind to me. The curlew was introduced into England by William the Conqueror. The rules of decency and good manners condemn this action. Every good citizen owes obedience to the laws and the constitution of his country. Good example is a language any one can understand. When you go out, buy me some pencils and pens. I am now living near the railway. During the ceremony a thunderstorm burst over the town. Although he is going to London he will not see his friend. These vegetables are pickled in vinegar. These colors will never become you. They were felling a tree. He knows his lesson wonderfully well.

SECOND CLASS LICENSE (Grade C.)

GEOGRAPHY.

1. Define water-shed, river system, mountain-range, giving examples of each, and state fully the principal causes and chief effects of ocean currents.

2. Compare the British and the Russian Empires in respect to population, area, resources and military strength.

3. Discuss the physical features of Holland and Switzerland.

4. Taking the area of Prince Edward Island as a unit, give the areas of the other Provinces of the Dominion.

5. Describe the Rhine, giving the countries or parts of countries that it drains and the cities on its banks.

6. Name (a) the counties of Ulster, (b) the midland counties of England, (c) the most noted cities of Italy.

7. Write a note of any two of the following: (a) Palestine, (b) Egypt, (c) Malaysia, (d) Chili, (e) British Columbia.

8. Draw an outline map of North America.

BRITISH HISTORY.

1. Give a description of the "Saxon" invasion and settlement of Britain with special reference to the religion, language and character of the invaders.

2. To what reign did the following characters belong: Jack Cade, Titus Oates, Lord George Gordon, Perkin Warbeck, Guy Fawkes, John Hampden, Daniel O'Connell.

3. Name the chief battles of the "Wars of the Roses," and describe the last one.

4. When were Ireland, Wales and Scotland severally united to England? Does this question to any extent admit of a two-fold interpretation? Explain.

5. Name the chief events of the reign of William IV, giving a brief description of each.

6. Describe at length any prominent event in the reign of Queen Victoria.

BRITISH AMERICAN HISTORY.

1. Give the dates of the two captures of Louisburg, and the name of the commander of each attacking expedition. What circumstances rendered the second siege necessary?

2. Name the most distinguished early explorers of America. Give as many particulars of each as you can.

3. Assign events to the following dates in B. A. History, and describe any two of them: 1605, 1642, 1710, 1755, 1784, 1825, 1841, 1849, 1864, 1871, 1873.

4. How did the war of the American Revolution affect Nova Scotia during its progress and by its results?

5. Describe the Parliament of the Dominion.

COMPOSITION.

1. Expand the words printed in italics in the following sentences into clauses. *The day being fair*, we started on our journey. *Having being deceived once*, I never trusted him again. No one doubts the *sincerity of the man*. We hired a boat *to cross the river*.

2. Write in prose form the story as contained in the following:

Three fishers went sailing away to the west,
Away to the west as the sun went down,
Each thought of the woman who loved him the best,
And the children stood watching them out of the town;
For men must work and women must weep,
And there's little to earn and many to keep.
Though the harbor bar be moaning.

Three wives sat up in the lighthouse tower,
And trimmed the lamps as the sun went down;
They looked at the squall, and they looked at the shower,
And the night-rack came rolling up, ragged and brown;
But men must work, and women must weep,
Though storms be sudden and waters deep,
And the harbor bar be moaning.

Three corpses lay out on the shining sands,
In the morning gleam, as the tide went down,
And the women are weeping and wringing their hands