5. To draw a straight line perpendicular to a given plane from a given point without it.

6. Of all triangles having equal bases and equal vertical angles, the isosceles triangle has the greatest area.

7. Describe a square in a given triangle.

ALGEBRA.

1. Simplify

$$\frac{2x}{x^2+1} \text{ and } \frac{1}{(x-3)(x-4)} - \frac{2}{(x-2)(x-4)} + \frac{1}{(x-2)(x-3)}$$

$$\frac{1}{x^2}$$

2. Solve
$$x^2 + y^2 = 34$$
$$x^2 + y^2 + \sqrt{x^2 - y^2} = 20.$$

3. Extract the square root of $14 - 4\sqrt{6}$.

4. The intensity of two lights are as 4 to 9. At what distances from the stronger light are their illuminating powers equal, supposing them placed 12 feet apart?

5 Find a value for x in the equation
$$8x^3 + 16x = 9.$$

6. Define an indeterminate equation, and find the positive integral values of x and y in the equation
$$8x - 5y = 37.$$

LATIN COMPOSITION.

(A lexicon may be used, but no other book.)

Translate into Latin:—

1. Never, O Conscript Fathers, shall I repent of my actions and advice.

2. They gladly exchange peace for war, riches for poverty.

3. The Samnites wished to bribe (lit. corrupt with gold), Curius, but he did not swerve from integrity.

4. I fear that I shall not increase your happiness.

5. I cannot conjecture why he has not come to the aid of the City.

6. Remember good men; forget bad ones.

7. It is foolish not to know where you are going.

8. He rejected the proposal, and this the more because, relying on the bravery of his troops, he anticipated an easy victory.

ROMAN HISTORY.

1. Mention in detail the political, social and military regulations popularly ascribed to Romulus.

2. Write a note on the history of Rome under the Kings.

3. Pyrrhus:—(1) his early history, (2) the circumstances of his participation in Italian affairs, (3) his career in Italy, (4) result of his defeat.

4. Mithridates:—(1) the object of his ambition and methods taken for its accomplishment. (2) Brief sketch of so-called Mithridatic wars.

5. Name the chief Latin authors of the Augustan Age, with the titles of the principal works of each.

6. Write a sketch of the character and career of Cicero.

GREEK PROSE COMPOSITION.

(A lexicon may be used, but no other book.)

Translate into English:—

1. Be not discouraged soldiers; the enemy will soon be in sight.

2. The Lacedemonians hold sway on land and sea at the present time.

3. If I have spoken well and worthily, I have spoken as I would; if in an inferior manner, as I could.

4. The Greeks saw the hills gladly, as was natural, for their enemies were mounted.

5. No one ever heard Socrates saying anything impious or false.

6. Had I been permitted to speak, I would have pointed out the the right way.

GREEK HISTORY.

1. Describe the physical geography of Greece in its relation to national history.

2. What did the Greeks themselves understand by the term *Hellas?* Mention the chief ties which bound together the Grecian world.

3. Describe the battle of Marathon, with the circumstances immediately preceding it.

4. Pericles:—(1) Political changes brought about by him; (2) his administration and foreign policy; (3) his character and accomplishments.

5. Write notes suggested by the terms *Parthenon, Areopagus, Erectheum, Pnyx.*

FIRST-CLASS LICENSES. (Grade B.)

BRITISH HISTORY.

1. Give a sketch of the reign of Henry I.

2. State precisely the claim of Edward III. to the throne of France. Name his rival, and state the latter's claim.

3. Write a sketch of the career of Cromwell after his assumption of the title of Lord Protector.

4. What instances have occurred in English history of the deposition of the reigning sovereign? Give date and brief account of circumstances in each case.

5. Describe the Constitution of the House of Lords.

6. Write a note on each of the following:—"South Sea Scheme," "Chartists," "Jacobites," "the Great Commoner."

BRITISH AMERICAN HISTORY.

1. Write a brief sketch of the career of Champlain.

2. Give a short account of the *United Empire Loyalists* and their places of settlement.

3. Write notes on "Barry Riot," "Brandy Dispute," "Pontiac," "Clergy Reserves."

4. Give an account of the introduction of Responsible Government into Nova Scotia.

5. State measures taken by Canada for acquiring the North-West Territory. Describe the terms of transfer, and brifly narrate subsequent events through the administration of Governor Archibald.

GENERAL GEOGRAPHY.

1. Show how man adapts himself to the various conditions of the place in which he lives, and also how the climate and physical aspects of a country affect the civilization of the inhabitants.

2. Give as full a description as you can of the four great natural divisions of the Continent of North America.

3. Write a note on France, with particular reference to its surface, coast line, cities and manufacturing towns.

4. Name the British possessions outside of Europe in the order of their importance, with reasons for the order of the first four.

5. Name the counties, coast waters, capes and islands of Ireland.

6. Japan—its situation, surface, history, people, manufactures, cities and government.

7. Find the hour at which the sun rises and sets at a given place on a given day. (Globe.)

BRITISH AMERICAN GEOGRAPHY.

1. Name the largest rivers of the Dominion—with their tributaries—their sources and directions.

2. Write a note on the climate of each of the Provinces of the Dominion.

3. Name the fourteen counties of Quebec, north of the St. Lawrence.

4. Name the cities of Ontario in the order of their size, with their situation.

5. Draw an outline map of the Dominion.

[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. Define and explain the terms "Simple Bodies" or "Elements," and "Compound Bodies." Give examples of each, and give the number of elements so far known.

2. Detail an experiment for determining the composition of water by *weight*.