

4. Describe the difference in structure between the root and the stem in Dicotyledons.
5. Describe the structure of the stem in Monocotyledons and in Dicotyledons respectively, giving the names of the different parts.
6. Describe the differences in the mode of growth between a leaf and a stem in flowering plants.
7. Describe the different modes by which parasites, saprophytes, and epiphytes obtain nourishment.
8. Explain fully how it is that plants can live in an air-tight Wardian case without any change of air.
9. What is meant by alternation of generations in plants? Give an example.

CLASS D.—ZOOLOGY (Optional).

Time allowed: Three hours.

1. Describe the structure of a sponge. Explain why the sponges found commonly on the shore are not adapted for household purposes.
2. Give the differences in structure and external form that distinguish a slug from an earthworm.
3. State the differences that distinguish a moth, a beetle, a cockroach, a cicada, a honey-bee, and a blue-bottle fly.
4. Describe the apparatus for respiration in a bony fish, and state how it acts.
5. Give as many points of difference as you can, in external and internal structure, between a kiwi and a fowl.
6. Describe the stomach of a sheep, and the process of rumination.
7. State in detail how the food which an animal takes into its stomach finds its way to the tissues which have to be nourished.
8. A quantity of carbon is set free in the tissues from the decomposition of the protoplasm. Describe what becomes of this carbon.
9. Describe the structure of the human skin.

CLASS D.—GEOLOGY (Optional).

Time allowed: Three hours.

1. The detritus of a granitic district is carried down by a river, and spread out in the sea in the form of sand and clay. Explain how it is that the detritus is separated into sand and clay, and explain the relative positions in which each of these rocks will be formed.
2. Define the two great classes of sedimentary and eruptive rocks, showing how they can be distinguished from each other.
3. Define the meanings of the terms "dip" and "strike," and draw a diagram explaining them.
4. Why are fossils useful to a geologist? What do they prove to him?
5. How are concretions formed? Explain the difference between a concretion and a boulder.
6. Draw an ideal section through a volcanic mountain, and explain its structure.
7. State your opinion as to the origin of valleys in mountain chains, giving the reasons for your opinion.
8. By what evidences do geologists prove the former existence of glaciers in some places where no glaciers are now found? Describe the evidence in detail.

CLASS D.—FRENCH (Optional).

Time allowed: Three hours.

1. What difference is there in meaning between *a* and *à*, *la* and *là*, *des* and *dès*, *ou* and *où*, *du* and *dû*, *sur* and *sûr*?
2. Give the feminine of *absous*, *favori*, *jumeau*, *long*, *traître*.
3. Grammarians speak of three comparatives, viz., of superiority, inferiority, and equality. How are they formed in French?
4. Give the French for the cardinal, ordinal, collective, and distributive of 1, 2, 3, 4, 5.
5. What is the difference between *ce* the demonstrative adjective and *ce* the demonstrative pronoun?
6. Write out in full the present indicative of the verb *se lever*—affirmatively, negatively, interrogatively, and negatively-interrogatively.
7. What are the various meanings of *on*? What is its derivation? Whence does it arise that *on* is sometimes preceded by *'*?
8. Translate the following sentences, in order to show the different meanings which *de* may bear:—
Je viens de Paris.
Ne venez pas de nuit.
Je suis enchanté de son succès.
Mon frère a aussi une montre d'argent.
Nous bûmes le jour de l'an du vin de Champagne.
Il tremblait de peur.
9. Write out in full the verb *il gèle*.
10. When should the perfect definite be used, and when should the perfect indefinite be used?
11. Verbs ending in *-eler* and *-eter* double the *l* or *t* before a mute syllable. Do you know any exceptions to this rule?
12. There is only one verb which does not take a circumflex in the 1st and 2nd persons plural of the perfect definite, and in the 3rd person singular of the imperfect subjunctive: which is it?
13. What is the difference in meaning between *connaître* and *savoir*?
14. Give the principal parts of the following verbs: *envoyer*, *ouvrir*, *sentir*, *voir*, and *craindre*.
15. After what conjunctive phrases should the subjunctive be used?
16. By what general rules can you be guided as to the proper position of some adjectives in French?