

soils it is most advantageous. Give the chemical composition of quick lime, slaked lime, mild lime, limestone, and chalk. What is marl?

11. Under what circumstances is ammonia known to be produced naturally? Explain its importance in regard to the vegetable world.

*Female Candidates may, if they choose, substitute the following Questions for Questions 8, 9, 10, and 11.*

12. How would you proceed in order to—

(i.) Cook a beefsteak. (ii.) Poach eggs. (iii.) Make good toast. (iv.) Prepare a nice dinner in the month of July at a farmhouse, where the only meat procurable is fat salt pork. *N.B.*—Nothing expensive is to be used, and nothing that cannot usually, or at least easily, be had in a farmhouse.

13. Why should a house be ventilated and beds aired?

14. Point out the advantages and disadvantages of having many windows in a house.

## PHYSIOLOGY AND ZOOLOGY.

FIRST CLASS TEACHERS.

*Examiner: JAMES HUGHES.*

1. (a) Explain the process of circulation. (b) What is the shortest course by which a drop of blood can return to the right auricle after leaving the left ventricle? (c) Why is it so dangerous to drink freely of cold water when the body is overheated? (d) A pupil is bleeding profusely. How would you decide whether he had severed an artery or a vein? If an artery, what course would you adopt?
2. Describe the structure of the eye, and mention the uses of its most important parts.
3. (a) Name the four classes of substances of which the food is composed. (b) Which are essential? (c) Why would a person fed only on Fats, Starches, Sugar, Dextrine, and Gums gradually die of starvation?
4. When is it particularly injurious to study hard? Give reasons for your answers.
5. (a) Describe the circulation of reptiles. (b) How do reptiles reproduce themselves?
6. (a) Give the general characters of the mammalia. (b) Which mammals have no hair when grown up, and no external ears?
7. (a) Explain the nature and objects of the peculiarities in the skeletons of birds. (b) What means are adopted to reduce the specific gravity of their bodies?
8. Give the sub-kingdom, class and order of the following: Gorilla, Rabbit, Bear, Buffalo, Owl, Pigeon, Stork, Parrot, Alligator, Turtle, Salmon, Clam, Lobster, Beetle, Butterfly.

## Notes and News.

### ONTARIO.

**FRAUDULENT PRACTICES AT TEACHERS' EXAMINATIONS.**—Evidence having been submitted to the Minister of Education by the Central Committee that certain parties had obtained copies of the First and Second-class Examination Papers previous to the last Examination, Mr. James Hughes, Public School Inspector of Toronto, was appointed a Commissioner to investigate the matter. Mr. Hughes has not, at this writing, concluded his investigation, but sufficient has already been elicited to show that a large number of candidates actually had the papers for some three weeks before the Examination took place. These candidates were most of them in attendance at the Toronto Normal School. The evidence shows that the papers were stolen from the establishment of Messrs. Hunter, Rose & Co., by one of their pressmen, named Frank Metcalfe, although the press-work was done at night and three foremen remained to watch those who worked the presses. He disposed of both First and Second class papers to a printer in the employ of Lovell & Co., named Wm. Patterson. He was the chief distributing agent. He sold the papers to another printer named Pritchard; to a teacher in Walkerton, named Collins; to his brother Adam, for a man named Morrison, who resides in Newark, New Jersey; to William Clarke, a First-class candidate, and to five Second-class candidates who attended Toronto Normal School. Clark gave the papers to

J. Smith Wood, and he gave them to Wm. Neilly, Wm. McGregor, and David Cornell. These, so far as known, are all the First-class candidates who had the papers. The five Second-class students who received the papers from Patterson were E. Rowe, J. A. Webster, R. E. Preston, C. J. Atkinson and H. McKone. They re-sold the papers to D. G. Storms, J. Mabee, J. J. Beattie, J. Dick, W. C. Murray, A. Dickie, J. Hogarth, W. Irwin, A. Smith, James McStevenson, R. C. Cheesewright, J. D. Webster, T. O. Webster, G. Wilkinson, Playter May, R. Gornley, and Miss E. Hudson. Besides these Pritchard, above named, supplied papers to R. J. Trumppour, for himself and five others; viz.: H. T. Johnston, J. A. Dole, J. A. Rutherford, J. Ross, and Noble Dickey. Robert White and J. Gilchrist were shown parts of the papers. H. T. Collins, of Walkerton, got the Mathematical and Book-keeping papers worked for him by D. Forsythe, B.A., Mathematical Master, Berlin High School. Other revelations are expected by the Commissioner before the evidence is completed. A notable feature in connection with the case is the fact that George Morrison, from Newark, New Jersey, has apparently been connected with the pre-issue of examination papers in this Province for years past. He was introduced to some of the Normal School students at the close of 1869, and then gave assurances of his ability to give "assistance" at future examinations. In 1873, he assured Adam Patterson, in New York, that if he (Patterson) returned to Toronto to reside, he could put him in the way of making money by selling examination papers. Altogether, the case reveals a low state of feeling on the part of many candidates, and shows the absolute necessity for making a change in the present system of having the papers printed. The Department might have a press in connection with the Education Office, and the papers for First-class candidates ought, if possible, to be Papyrographed in the Examination Hall on the morning of the examination. If necessary, all First-class candidates might be brought to Toronto in order to carry out this plan. The investigation will doubtless have a salutary effect in calling the attention of all Examining Boards to the fact that candidates for honours are not always honest.

The attendance of teachers at the last meeting of the West Durham Teachers' Association, held at Newcastle, was good, and the business transacted and topics discussed were of importance to the teaching profession. During the first day the subject of competitive examinations was discussed and arrangements made for next year. A number of resolutions were also passed bearing upon school law and departmental regulations, viz.: expressing confidence in the County Model School system lately established, as admirably adapted for the training of Public School teachers; recommending that the work for first-class certificates be divided into three sections—English, Mathematics, and Natural Science—any one of which may be taken in one year, thus giving an opportunity to pass the first-class examination by taking one department at a time; also recommending that those third-class teachers who have taught successfully for three years be, in future as well as the past, allowed to take a second-class without attending a Normal school; and expressing an opinion that the addition of Euclid, Algebra and English Literature to the list of subjects for third-class certificates will be advantageous to the country.

The High School system of the Province appears to be expanding and improving more rapidly this year than ever before. Amongst recent changes and proposed changes we notice that the people of Mount Forest are petitioning for leave to start a new school and are willing to give the necessary guarantees. A third teacher is about to be added to the Goderich High School staff, and that of London has recently been increased, while a new and handsome school building is in process of erection. A marked change for the better has taken place in the condition of some of the smaller schools, which were not long ago in a moribund condition. Under the management of the present Head Master, Mr. Cruikshank, Grimsby school, which had fallen very low, is steadily improving, and may now be regarded as out of all danger, provided the trustees second liberally the efforts of the masters. Port Rowan school, under A. Carlyle, M.A. (Tor.), has shown greatly increased vitality, and the trustees now manifest a disposition to keep it in good working order. It too may be regarded as in a fair way to assured permanency and success. On the other hand, an effort to revive the defunct High School at Stirling is not likely to be favorably regarded at head-quarters, mainly on account of the fact that the construction of a new railroad has made Madoc or some other place north of Stirling a more desirable site for a High School.