

1894.
NEW ZEALAND.

EDUCATION: TEACHERS' AND CIVIL SERVICE EXAMINATIONS.

[In continuation of E.—1A, 1893.]

Presented to both Houses of the General Assembly by command of His Excellency.

The INSPECTOR-GENERAL OF SCHOOLS to the Hon. the MINISTER of EDUCATION.

SIR,— Education Department, Wellington, 9th April, 1894.
I have the honour to report that the annual examination of candidates for teachers' certificates took place in the month of January at the time prescribed by regulation, and that, as usual, the senior and junior examinations for the Civil Service were conducted under the same management and supervision. Candidates were examined at Thames, Tauranga, Gisborne, Reefton, Westport, and Oamaru, as well as at the thirteen Education Board centres.

The fees received amount to £800 15s., and the expenses of the examinations (including prizes for drawing and elementary science) to £709 13s. 3d.

The number of candidates entered for examination was 1,112. The candidates for the teachers' examinations were 713: 220 for Class D, 148 "partial pass" candidates to complete the examination for Class D, 218 for Class E, and 127 "partial pass" candidates to complete the examination for Class E. Of these 713 candidates, 184 had already passed for Class E, and were seeking promotion to Class D. Of the remaining number—529—there were 133 teachers in the service of the Boards of Education or of the Department; 240 pupil-teachers; 60 normal-school students in training; 35 persons who had ceased to be connected with the public-school system as teachers, pupil-teachers, or normal-school students; and 61 who had not been in any such way connected with the system.

Of the whole number of 713 candidates, 403 have improved their status through this examination, two having passed for Class C, 105 for Class D, 136 for Class E, while 85 (including 11 of those who passed for Class E) obtained a "partial pass" for Class D, and 86 obtained a "partial pass" for Class E. I enclose a list of passes and "partial passes."

The following table exhibits at one view the facts already stated with respect to the success of the candidates at the examination for teachers' certificates:—

Status before Examination.	Number of Candidates.	Results of the Examinations.					
		Pass for D.	Pass for E.	Pass for E, and Partial Pass for D.	Partial Pass for D.	Partial Pass for E.	Total.
Passed before for E ...	184	41	...	...	35	...	76
Not passed before—							
Teachers ...	133	10	38	...	2	9	59
Pupil-teachers ...	240	14	67	3	18	66	168
Normal students ...	60	32*	5	6	10	1	54
Retired ...	35	4	7	1	1	5	18
Outside candidates ...	61	6	8	1	8	5	28
Totals ...	713	107	125	11	74	86	403

* Including two passes for Class C.

The examination has added 55 names to the list of "failed" candidates, and has removed 12 from the list, increasing the number from 620 to 663.

Twenty-one candidates availed themselves of the opportunity afforded to pupil-teachers to take up one branch of drawing in each year of their course, and 19 of them satisfied the examiner.

For the Senior Civil Service 75 candidates entered, 16 of them to complete examination partially passed in a previous year, and four for shorthand only. There were 303 candidates for the Junior Civil Service examination. The results were published in the *Gazette* of 22nd February. The passes in the Senior examination were 24, besides two in shorthand. The Junior list contained 146 names.

I enclose copies of the examination papers.

The Hon. the Minister of Education.

I have, &c.,
WM. JAS. HABENS.

EXAMINATION LISTS.

I.—PASSES.

PASSED FOR CLASS C (University status being taken into account).

Otago—

Heatley, Frederic Joseph.
Turner, William Wilson.

PASSED FOR CLASS D.

Auckland—

Brown, George.
Browne, Catherine Alethea.
Butters, Annie Adeline.
Edenborough, Edith Vane.
Gaudin, Frederic Edward Norman.
Gillies, John Henry.
Hill, Arthur John.
Keane, Emma Hilda.
Sheffield, Eva Jane.
Shroff, Alfred Homy.
Shroff, Kate Sherin May.
Smart, David Lowson.
Walker, Louisa Florence.

Wanganui—

Curtis, Harriet.
McCaul, George William.
O'Dea, Patrick.
Stewart, Harry Cornfoot.

Wellington—

Baird, Laura Ethel.
Davidson, Jessie Laura.
Helyer, Elizabeth.
Kay, John.
McGregor, Lois.
Stanton, Catherine Mary.

Hawke's Bay—

Burdett, Harriet Grace.
Faram, Frank Coe.
Victor, James.

Marlborough—

Pritchard, Florence.

Nelson—

Enright, Margaret Helena.
Forsyth, Donald Eric.
Langford, Herbert.
McEachen, Ethel Linda.

Westland—

Evison, John Crouchley Murray.
Nightingale, Henry John.
Wilson, Margaret Ann.

North Canterbury—

Alexander, Anne Elizabeth.
Baird, Samuel.
Banks, James.
Berry, William.
Bowbyes, Alfred Clarence.
Braven, Minnie Mary Hannah.
Curd, Frank Burley.
Curd, Hannah.
Douds, Thomas.
Evans, Francis Thomas.
Ferguson, Samuel Hay.
Gardner, Mary.

Hempleman, Frederick August.

Howard, Lucy Alice.

Howes, Edith Annie.

Johnson, Oscar.

King, Eustace.

Livingstone, Hugh Alexander.

Lusk, Amelia.

McKee, Elisabeth.

Malcolm, Robert Andrew.

Maxwell, Alfred Charles.

Morrison, Margaret Paterson.

Osborn, Emily Maria.

O'Shaughnessy, Bernard.

Penlington, Henry Frank.

Pratt, Minnie Ellen.

Richardson, Henry Hay.

Rutledge, Mary Woods.

Shrimpton, Arnold Wilfrid.

Smith, Lena Rachel.

Sørensen, Marian Jean.

Thomas, Walter.

Thwaites, John Edward.

Waddell, James Marshall.

Williamson, Marjorie Ann.

South Canterbury—

McLeod, John, iv. (Burke's Pass).

Oxby, Annie Elizabeth.

Otago—

Bowie, John.

Boyd, Annie.

Brown, Jane Laura Hastie.

Campbell, Flora.

Chesney, Andrew.

Davis, Edward.

Don, Helen.

Downes, Ada Helena.

Fegans, Frances Magdalene Stewart.

Ford, Margaret.

Gibb, Helen Cunningham.

Gunn, Alice Mary.

Hamilton, Thomas Bennett.

King, Jane.

Leary, Bertha Lucy.

McClelland, William.

Macdonald, Sophie Elizabeth.

MacGregor, Margaret.

McLean, Alexander, iii. (Dunedin).

MacLeod, Isabella.

Marryatt, Florence Mary.

Mawson, William.

Morton, Minnie.

Scott, Robert.

Smith, Annie Jane.

Taylor, Harry Thompson.

Thompson, Marion.

Tomlinson, Rhoda Faulding.

Trayes, Catherine Isabella.

White, Eliza.

White, Mary Eliza.

Young, Jane Morris.

Southland—

Cowie, James Alexander.

PASSED FOR CLASS E.

Auckland—

Alexandre, Elise Louisa.
 Andrews, Ethel Clara.
 Aubin, Estelle Jeanne.
 Carruth, Ada Eliza.
 Clarke, Edith Rose.
 Couldrey, Florence.
 Cox, Marie.
 Croker, Grace Jane.
 Croskery, Mary.
 Forde, Herbert Ernest.
 Gatland, Alfred Hildyard.
 Gillespie, William Rollo.
 Gillett, Richard.
 Glasson, Hedley Evans.
 Gubb, Lily.
 Jamieson, Robert Edward.
 Johnston, James Harvey.
 Jones, Herbert John.
 Jones, Thomas Rogers.
 Jones, Winifred Lucreatia.
 Judkins, Alfred John Thomas.
 Krippner, Annie Barbara Christina
 Lever, Florence Mary.
 Lindsay, Alice Margaret.
 McGee, Maxwell.
 McGibbon, Helen Margaret Stuart.
 MacLaurin, Kenneth Campbell.
 Mandeno, Helen Lloyd.
 Martyn, Adah Young.
 Moor, William James.
 Newton, Edith Mary.
 Niccol, Sarah Kate.
 Perkins, Edward.
 Pitwood, Florence Maud.
 Potter, Ethel May.
 Ray, Richard Percy Johnson.
 Reid, Sarah Anne.
 Revitt, Effie Marion.
 Reynolds, Kate.
 Shepherd, Lilian Forsey.
 Stevens, Louisa May.
 Stewart, Sarah.
 Sturtevant, Mary.
 Taylor, Kate Alice.
 Taylor, Mary Helena.
 Thompson, Henry Harsant.
 Willerton, Florence.
 Wilson, Sophia.

Taranaki—

Vaughan, Henry Edward.
 West, Isaac Moody.

Wanganui—

Barrett, Herbert James.
 Burr, Elizabeth.
 Ecclesfield, Esther.
 Hill, Edith Frances.
 Ironmonger, Edwin Lovell.
 McMeekin, Emma.
 Matthews, James.
 Mowbray, Edith.
 Muir, William John Wilson.
 Nairn, James.
 Peat, Janet Harriet.
 Powell, Albert Hugh.
 Roache, Patrick Henry.
 Scott, Annie Wilson.
 Stonehouse, Richard Robert.
 Thurston, James Fisher.
 Welsh, Alfred Ernest.

Wellington—

Christie, Elizabeth May.
 Cook, Amelia Ann.
 Cooper, Emily Margaret.

Gregory, Frederick William.
 Kelleher, Caroline Helena.
 Letham, Sara.
 Manning, Alice Mary.
 Meager, Ellen Ann.
 Mitchell, Janet.
 Nimmo, Margaret Rankine.
 Richardson, Jessie Mary.
 Sage, Agnes.
 Sage, Edith Mary.
 Treadwell, Clara.
 Usshur, Martha Jane.
 Wilson, Marion Kitty.

Hawke's Bay—

Baker, Frances Elizabeth Eling.
 Down, Agnes.
 Faram, Frederick Thomas.
 Ferguson, Mary Emily.
 Leslie, David Ernest.
 Prentice, Emily.
 Scotter, Adolphus Nelson.
 Smith, Isabel.

Marlborough—

Stratford, Herbert Addison.

Nelson—

Baigent, Gertrude Nicol.
 Baigent, Louis Oliver.
 Brereton, Matilda.
 Burnett, Isobel Alexandrina.
 Eves, Esther.
 Huddleston, Herman Bruce.
 Martin, Annie.
 Sadd, Mary Elizabeth.
 Salmond, Jessie.

Westland—

Perry, Edith.
 Seddon, Mary Stuart Charleston.

North Canterbury—

Anderson, Caroline Violet.
 Banks, Ada Florence.
 Edwards, Mazzie Pierrepont.
 Howie, Isabella.
 McLennan, Duncan.
 Menzies, Kitty.
 Ryan, Edith Ellen.
 Sayers, May.
 Taylor, Julia.

South Canterbury—

Beattie, Annie.
 Campbell, Emma Gilmore.
 Colbert, James.
 Cooke, Montague Percy.
 Cotter, Winifred Shaw.
 Fyfe, Jessie.
 Scott, Annie.
 Strachan, Barbara.

Otago—

Anderson, David Dow.
 Birch, Annie.
 Dickie, Margaret Denny.
 Falck, Henrietta.
 Graham, Amy Segunda Frances de Longueville.
 Grant, John Buchanan.
 Johnson, Minnie.
 Murray, Ethel May.
 Neil, Lydia.
 Reid, Elizabeth Jane Meek.
 Thomson, Alexander George.
 White, Katharine.

Southland—

Fullarton, Jessie.
 McCallum, Mary.
 Pratt, Agness.
 Sutton, Mary Anne Gresswell.

II.—PARTIAL PASSES.

OBTAINED PARTIAL PASS FOR CLASS D.

Auckland—

Bower, Mary Isabel.
 Burfoot, Maud Hannah.
 Caldwell, Alice Mary.
 Chappell, William.
 Coad, Emma Maria.
 Collis, William Francis.
 Connor, William John.
 Darby, Edward Joseph.
 Darrow, Harry Alexander.
 Grant, Elsie Donaldson.

Harris, Samuel.
 Holloway, Annie Elizabeth.
 Jameson, Frank.
 Jones, Esther Mary.
 Lee, John Wesley.
 Lupton, Roger.
 Marsdon, William Henry Pasco.
 Murphy, Francis.
 Somerville, George Arthur.
 Spence, Jane Catherine.
 Warn, John Martin.
 Waygood, James Evans.

Wanganui—

Matthews, Howard.
Insoll, Thomas Baker.
Prendergast, Joanna.

Wellington—

Bary, Charles.
Braithwaite, Mary Susanna.
Brann, Grace Ludlow.
Broome, Kate Ellinor.
Foss, Reginald John.
Holm, Annie Alexander.
McKenzie, Alexander.
Nott, Emily Amelia.
Wilson, Mary Henrietta.

Hawke's Bay—

Banks, Annie Louisa.

Marlborough—

McIntyre, Ruth Mary Dundas.

Nelson—

Beuke, Amelia Mary Sophia.
Boswell, Edward Blair Buchanan.
Dent, Alice Maud.
Maloney, John William.
Ross, Helen Bruce.
Rumbold, William Alexander.
Sigley, Henry Charles.

Grey—

Blair, Christina.
Henderson, Beattie Mary.

Westland—

Potts, Mary Jardine.
Robertson, Frederick Henry.
Sinclair, George Kennedy.
Sullivan, Mary Margaret.

North Canterbury—

Anderson, Caroline Violet.
Banks, Ada Florence.
Edwards, Mazzie Pierrepont.
Franklin, Florence Belleaner.
Goodland, Annie Eliza.
Hodgson, Adèle.
Kerr, Matthew James.
Ladbroke, Charlotte Jane.
Lawrell, Fanny Emelia.
McRae, Jane.
Menzies, Margaret Boyd.
Mounsey, Elsie Ellen.
Sayers, May.
Scott, Elizabeth Mary.
Todd, Isabel Margaret.
Trevella, Arthur.
West, Donald Sloan.

South Canterbury—

Brown, Gertrude Alice.

Otago—

Birch, Annie.
Brodie, Thomas.
Dunlop, Margaret.
Ferguson, Albert James.
Foote, Frank.
Graham, Amy Segunda Frances de Longueville.
Grant, John Buchanan.
Kinder, Jessie.
Matheson, Duncan Robertson.
Moss, Katherine.
Neil, Lydia.
Reid, Elizabeth Jane Meek.
Reid, Jessie Imlah.
White, Katharine.

Southland—

Baird, Helen Stephen.
Featherstone, Arthur Eversfield.
Hiddleston, John Frederick Crombie.
Sutton, Mary Anne Gresswell.

OBTAINED PARTIAL PASS FOR CLASS E.

Auckland—

Arey, Alice Mildred.
Ball, Thomasina.
Baston, Florence.
Boden, Martha.
Bowden, Alfred Norman.
Brook, Ann Elizabeth.
Duffus, Elizabeth Paul.
Goldsworthy, Clara Garrick.
Gregory, Eva.
Hamilton, Josephine.

Hardy, Florence Frances.
Herrick, Edith Elizabeth.
Irwin, Alexandrina Mary.
Jones, Martha Rogers.
Jones, Richard David.
Keaney, John Joseph.
Kerr, Agnes Graham.
McNaughton, David William.
Mandeno, Maud Catherine.
Maxwell, Margaret.
Rodgers, Thomas.
Rudall, John Henry.
Scandrett, Hessey Maria.
Sutton, Elizabeth.
Turner, Alfred Arbuthnot.
Usher, Agnes.
Vellenoweth, Lilian.
Vincent, Louisa.
Wallis, Mary Ellen.
Warn, Ellen.

Taranaki—

Cowling, Rose Alice.

Wanganui—

Barr, Grace.
Kelly, Elizabeth Jane.
McDonogh, Aimée Mary.
Mackay, Duncan Henry.
Martin, Mary Agnes.
Spurdle, Helen Jane.

Wellington—

Allender, Elizabeth.
Anderson, Wigo.
Ballachey, Ernest Harold.
Broadbent, Mary Agnes.
Donald, Jane Margaret.
Fitchett, Jessie Hannah.
Guest, Joseph John.
Hopwood, Mary Elizabeth.
Kirk, George William.
Lewis, Eleanor Eliza.
Look, Edward John.
Miller, Jane McLaren.
Parsons, Anna Catherine.
Tabor, Florence Catherine Eulalie.

Hawke's Bay—

Hall, Laura.
Redward, Edith Mary.
Stewart, Agnes Grigor.
Tuely, Catherine Bertha.
Witty, Lydia Louise.

Nelson—

Fittall, Alice Ellen.
Haycock, Clara Emma.
Haycock, Ella Grace.
Poole, William Elgar.
Tarrant, Elizabeth Constance.

Westland—

Crawford, Louisa Jean.
Moore, Joanna.
Seebeck, Albert Henry.
Smith, Cecilia Kermick.

North Canterbury—

Coleman, Mary.
Craddock, Mary Amelia.
Howard, Emily Charlotte.
Joyce, Blanche.
Reese, Jeanie.

South Canterbury—

Avison, Lizzie.
Bowcher, Maude Lucy.
Freeman, Martha Frances.
Hassell, Margaret Jane Letitia.

Otago—

Crawshaw, George.
McKenzie, Norman L.
Masters, Ellen Jemima.
Steadman, David Dickie.

Southland—

Bellamy, Elizabeth Wood.
Cameron, Catherine.
Cumming, Margaret.
Jamieson, Elizabeth.
Lea, Albert George.
McKenzie, Donald.
Rout, Alice Bradford.
Ward, Harriet Ellen.

III.—PRIZES.

Classes D and E.

Drawing—

Richardson, Jessie Mary, Wellington, first prize.
Cox, Marie, Auckland, second prize.
McKenzie, Donald, Southland, third prize.

Class D.

Elementary experimental science—

Bowie, John, Otago, first prize.
Oxby, Annie Elizabeth, South Canterbury, second prize.
Blair, Christina, Grey, third prize.

IV.—SPECIAL MENTION.

Class D.

English—

Baird, Helen Stephen, Southland.
Howes, Edith Annie, North Canterbury.
Oxby, Annie Elizabeth, South Canterbury.

Arithmetic—

Harris, Samuel, Auckland.
McRae, Jane, North Canterbury.
O'Dea, Patrick, Wanganui.
Robertson, Frederick Henry, Westland.
Shroff, Kate Sherin May, Auckland.
Walker, Louisa Florence, Auckland.

Geography—

Boswell, Edward Blair Buchanan, Nelson.
Jameson, Frank, Auckland.

History—

Darby, Edward Joseph, Auckland.
Nightingale, Henry John, Westland.
O'Dea, Patrick, Wanganui.
Oxby, Annie Elizabeth, South Canterbury.

Elementary Science—

Blair, Christina, Grey.
Bowbyes, Alfred Clarence, North Canterbury.
Bowie, John, Otago.
Evans, Francis Thomas, North Canterbury.
Evlson, John Crouchley Murray, Westland.
Harris, Samuel, Auckland.
O'Dea, Patrick, Wanganui.
Oxby, Annie Elizabeth, South Canterbury.
Power, James Livingstone, Hawke's Bay.
Ross, Helen Bruce, Nelson.
Waddell, James Marshall, North Canterbury.

German—

Beuke, Amelia Mary Sophia, Nelson.

Algebra—

Bower, Mary Isabel, Auckland.
Burfoot, Maud Hannah, Auckland.
Darby, Edward Joseph, Auckland.
Dunlop, Margaret, Otago.
Featherston, Arthur Eversfield, Southland.
Grant, Elsie Donaldson, Auckland.
Harris, Samuel, Auckland.
Kinder, Jessie, Otago.
O'Dea, Patrick, Wanganui.
Somerville, George Arthur, Auckland.
Waddell, James Marshall, North Canterbury.
Walker, Louisa Florence, Auckland.

Euclid—

Dunlop, Margaret, Otago.
Kinder, Jessie, Otago.
Walker, Louisa Florence, Auckland.

Mechanics—

O'Dea, Patrick, Wanganui.

Chemistry—

Wilson, Mary Henrietta, Wellington.

Biology—

Wilson, Mary Henrietta, Wellington.

Class E.

English—

Clarke, Edith Rose, Auckland.
Cooke, Montague Percy, South Canterbury.
Foote, Frank, Otago.
Judkins, Alfred John Thomas, Auckland.

Pitwood, Florence Maud, Auckland.
Scotter, Adolphus Nelson, Hawke's Bay.
Stonehouse, Richard Robert, Wanganui.
Stratford, Herbert Addison, Marlborough.

Arithmetic—

Ballachey, Ernest Harold, Wellington.
Gubb, Lily, Auckland.
Judkins, Alfred John Thomas, Auckland.
Parlane, Andrew, Otago.
Perry, Edith, Westland.
Poole, William Elgar, Nelson.
Reynolds, Kate, Auckland.
Rout, Alice Bradford, Southland.
Taylor, Harry Thomson, Otago.
Wallis, Mary Ellen, Auckland.

History—

Brereton, Matilda, Nelson.
Foote, Frank, Otago.
Fyfe, Jessie, South Canterbury.
Hopwood, Mary Elizabeth, Wellington.
Malcolm, Robert Andrew, North Canterbury.
Scott, Annie, South Canterbury.
Scotter, Adolphus Nelson, Hawke's Bay.
Stratford, Herbert Addison, Marlborough.
Taylor, Harry Thompson, Otago.
Thurston, James Fisher, Wanganui.
Vellenoweth, Lillian, Auckland.

Elementary Science—

Muir, William John Wilson, Wanganui.
Mulligan, Michael Philip, Auckland.
Powell, Albert Hugh, Wanganui.
Scotter, Adolphus Nelson, Hawke's Bay.
Thurston, James Fisher, Wanganui.

Domestic Economy—

Allender, Elizabeth, Wellington.
Cameron, Catherine, Southland.
Christie, Elizabeth May, Wellington.
Cox, Marie, Auckland.
Fitchett, Jessie Hannah, Wellington.
Fullarton, Jessie Ann, Southland.
Wilson, Marion Kitty, Wellington.

Classes D and E.

School-management—

Campbell, Flora, Otago.
Clarke, Edith Rose, Auckland.
Gardner, Mary, North Canterbury.
Graham, Amy Segunda Frances de Longueville, Otago.
Hamilton, Thomas Bennett, Otago.
Heatley, Frederic Joseph, Otago.
Macdonald, Sophia Elizabeth, Otago.
Marryatt, Florence Mary, Otago.
Smith, Annie Jane, Otago.
Tomlinson, Rhoda Faulding, Otago.
Turner, William Wilson, Otago.
Williamson, Marjorie Ann.

Drawing—

Burfoot, Maud Hannah, Auckland, freehand.
Cox, Marie, Auckland, model.
Guest, Joseph John, Wellington, model.
Matthews, Howard, Wanganui, perspective.
McKenzie, Donald, Southland, perspective.
Powell, Albert Hugh, Wanganui, perspective.
Richardson, Jessie Mary, Wellington, freehand.

EXAMINATION PAPERS.

School Management and Art of Teaching.—For Classes D and E. Time allowed: 3 hours.

[NOTE.—Candidates must select one Question in each Section, but not more than one.]

SECTION I.

State the rule for finding the average weekly roll. What is the rule for finding the average quarterly attendance? Find the true average and working average for a week; the roll-number

being 150, and the attendance for each half-day being respectively 140, 135; 72, 95; 125, 63; 135, 130; 110, Friday afternoon being a half-holiday.

SECTION II.

1. (a) State the principles which would guide you in framing a time-table; and (b) describe clearly the advantages of a good time-table, as contrasted with the want of such a time-table.
2. Construct a time-table for a country school of 65 children under a head teacher and a pupil-teacher. Show how each teacher is employed (Class P. and Standards I. to IV. included).

SECTION III.

Write fully notes of a lesson on—

- (a.) Coal, and its uses (Standard I.); or
- (b.) A geography lesson (Standard II.); or
- (c.) A grammar lesson (Standard V.).

N.B.—State the time given to the lesson, and show clearly the method adopted.

SECTION IV.

1. Distinguish between numeration and notation, and give your method of teaching them.
2. In teaching proportion, would you adopt the unitary method or the rule-of-three? Give your reasons for adopting the method.
3. What mental exercises would you employ to lead up to such a problem as the following?—A person who holds £670 3-per-cent. stock sells out at 88, and invests the proceeds at $3\frac{1}{2}$ per cent.: what change does this make in his income?

SECTION V.

1. State fully your method of giving a child a true idea of a river, and of its representation on a map.
2. By what means would you teach pupils to distinguish a lake from a sea, or an island from a peninsula?
3. Comment upon the following: "The best teaching-power of the school should, as much as possible, be brought to bear upon geography; and, in teaching it, the importance of an intelligent and familiar acquaintance with a map should be steadily kept in view."

SECTION VI.

1. Show that copying, especially in arithmetic, may be the result of bad teaching, or of bad discipline. How would you prevent it?
2. What are the physical and moral advantages of school drill?
3. Discuss the following: "You must not only have sympathetic insight yourself, but you must aim at rousing the imagination of your pupils; and that not only because it is a faculty which will be of the highest value to them in study and in life, but also because it is through the imagination of the pupils that you may bring interest and fascination into the weary round of tasks."

SECTION VII.

1. Write an essay on (a) habit, or (b) the importance of drawing as a school subject, or (c) the value of the study of any one of the plays of Shakespeare.

Elementary Experimental Science.—For Class D. Time allowed: 3 hours.

1. Define "force" and "acceleration." How would you show experimentally that the acceleration of a body is proportional to the magnitude of the force which causes it?
2. Distinguish between "flexibility" and "elasticity." State the experiments which you would make when dealing with elasticity, and give a *résumé* of the remarks with which you would accompany the experiments.
3. By what experiments would you illustrate a lesson on the fact that light travels in straight lines? Describe exactly how you would show the formation of a shadow with a sharp outline, and of a shadow with a marked penumbra.
4. What is meant by the "specific heat" of a body? Describe some method of measuring this quantity.
5. If you wished to show to a large class that certain experiments resulted in change of temperature, how would you proceed?
6. Describe the ordinary mariner's compass, and explain in detail how you would make such an instrument for class purposes.
7. Give some account of electrolysis. How would you obtain a copy in copper of the "head" of a florin?
8. Describe the preparation of chlorine gas, and write out a list of the experiments which you would make in illustration of its properties.
9. Write an abstract of a lesson on ammonia, mentioning the accompanying experiments.
10. What is the composition of soap? Explain its behaviour with hard water.

Elementary Science.—For Class E. Time allowed: 3 hours.

1. How is pressure distributed in fluids? Give experimental illustrations.
2. What is centrifugal force? How may it be illustrated? Give any natural examples you know of.
3. What is the gain in power of a screwjack the handle of which is 3ft. long, the screw having two turns to the inch? (Friction to be disregarded.)
4. What is meant by "specific gravity"? In what several ways may the specific gravity of liquids be determined?
5. Explain the use of a lens in an eye-glass, and in a camera. Draw sketches to illustrate your answer.
6. Describe an electrical machine, and the experiments you could make with it.
7. How would you make oxygen and hydrogen? Describe some of the experiments you would make to illustrate their properties.
8. Describe the manufacture of chlorine, and state its uses.
9. Describe the mechanism of breathing. What are its uses? How would you experimentally illustrate the action of the lungs?
10. Describe the skin, state its functions, and give an account of the nature and properties of soap.

Domestic Economy and Laws of Health.—For Class E. Time allowed: 3 hours.

[For women only,—alternative with Elementary Science.]

1. What is the advantage in digestibility of the peculiar physical condition of ordinary bread? How is this condition obtained, and what means are used to produce a similar condition in pastry?
2. Give a sketch of the digestive system, and describe the functions of its various parts.
3. Sketch the circulatory system, and describe the parts played by its excretory organs.
4. What are the essential points in the matter of house-drainage? How and why are sinks trapped?
5. Give the composition of soap, and state its uses. Why are wood-ashes occasionally substituted for it?
6. Draw a diagram illustrating the structure of the eye. What precautions are necessary in the schoolroom to avoid straining the children's sight?
7. What is the effect of muscular contraction on the circulation and respiration respectively, both local and general?
8. Distinguish between the stimulating effects of physical treatment, such as shower-baths or quick exercise, and of chemical stimulants, such as alcohol.
9. What are the main changes produced in food by cooking?
10. Give a general idea of the light that bacteriology has cast on the cause and cure of disease.

Elementary Knowledge of Agriculture.—For Class D. Time allowed: 3 hours.

1. Describe the structure of any flower you know well, and show how the fruit is formed from the flower.
2. What substances are formed when a plant is burnt? How could you prove the presence of some of the more important of these substances?
3. How does nitrogen occur in nature, and what are its chief chemical properties? Describe experiments which illustrate your answer. What important relation has nitrogen to the growth of plants?
4. What is humus, how is it formed, and what is its importance in the soil? How would you demonstrate the presence of humus, and what proportion may be found in a fertile soil?
5. How is water absorbed by the plant, and what purposes does it serve in it?
6. Give some account of the formation of soils. State in what important respects soils differ from one another, and explain why.
7. What do you understand by the capillary action of the soil, and what important lesson does it teach as to methods of cultivation? Describe experiments which will illustrate your meaning. How could you compare the capillary power of different soils?
8. What do you know as to the general composition of farmyard manure? Under what conditions is it subject to deterioration, and how would you prevent this?
9. By what principles would you be guided in choosing a manure for a particular crop or soil?

Elementary Knowledge of Agriculture.—For Class E. Time allowed: 3 hours.

1. What are the usual characters of the roots of plants? What are the various functions of the roots?
2. In what parts of the plant may supplies of food be stored? What is the source of food-materials, and for what purposes are they employed by the plant?
3. Distinguish between elements and compounds, and give examples. What is the composition of water? Describe experiments which illustrate your answer.
4. What are the functions of foliage-leaves? Give some account of the minute structure of the leaf, and show how it is related to its function.
5. What are the conditions necessary for the healthy growth of plants?

6. How would you perform a rough mechanical analysis of a soil? What influence has a state of division of the soil upon the growth of plants?

7. Why is it necessary to use manures? Distinguish between general and special manures, and give examples.

8. What changes take place in a soil which is allowed to lie fallow? What objection is the system of fallows open to, and how can it be avoided?

9. What is quicklime, and how is it made? What is the use of lime in agriculture?

English Grammar and Composition.—For Class D. Time allowed: 3 hours.

[All the questions except (1) or (2) to be attempted.]

*1. (a.) Distinguish logically the noun, pronoun, and adjective, and bring out the differences of grammatical usage in the italicised words: "With my *body* I thee serve." "His wife was a good sort of *body*." "Will any *body* help?" "Will any *person* help?" "*Body* of me! where is it?" "His *body-guard*."

(b.) Why is *divers* an adjective, whilst *several* is an adjective pronoun? Is *yonder* a pronoun in "It was the man *yonder*"? Is *so* a pronoun or an adverb in "I told you *so*"? Is *little* an adverb or a pronoun in "a *little* more," a pronoun or a noun in "a *little* of each"? Is *men* a noun or a pronoun in "*Men* say it is so"? What kind of pronoun and what person is *one* in "*One* must not be too rash"? Discuss these questions.

(c.) Can you justify either grammatically or historically the use of the italicised words in "*This* fourteen years have I laboured," "*these* kind of things," "whence all but *he* had fled," "Is it *me* you want?" Distinguish the uses of *myself* in "I did it *myself*" and "I did *myself* an injury," and of *him* in "He looked about *him*," "We saw *him*," and "*Him* we saw, her I did not see."

*2. (a.) What is the essential distinction between a proper and a common noun? Classify the italicised words and phrases in the following as proper and common nouns, and justify your classification in each case: "Some mute, inglorious *Milton*"; "One is a *Whig*, the other a *Conservative*"; "*the man with the iron mask*"; "*the incorruptible sea-green*"; "a *Wesley* or a *Whitfield*"; "*the founder of Methodism*"; "Can *Honour's* voice provoke the silent dust?"

(b.) Classify the italicised verbs in the following as reflexive, reciprocal, passive, causative, substantive, and justify your classification: "The butter will not *keep*"; "He *walked* the horse about"; "He *lived* a saint"; "They always *quarrel*"; "The book *sells* well"; "How *stand* you affected to his wish?"; "He *was* the man"; "*Prepare* for dinner."

(c.) Can you justify any or all of the following on historical or logical grounds?—"Nothing can excuse *his taking* the bribe"; "Nothing can excuse *him taking* the bribe"; "Nothing can excuse *his taking* of the bribe." Is the verb in the following passive or active?—"The house *is building*." How has the idiom arisen?

(d.) The tenses of the italicised verbs differ from one another; define each, and show how the usage can be logically defended: "We *start* to-morrow"; "He *is buttoning* his shoe"; "He *buttons* his shoe with a hook"; "He *will put* his head in the way, do what I may"; "Twere better done quickly"; "Water *finds* its level."

3. There is a word incorrectly used in each of the following; substitute the right word, and show why it is right:—

(a.) It is no easy matter to annihilate weeds when they have once got into a garden.

(b.) There are few now who cherish the illusion that Turkey will reform herself.

(c.) The Inspector was very thorough, and interrogated every pupil in geography and history.

(d.) There was strong ill-feeling shown in the last political battle, but it has now vanished.

(e.) The Judge was very lucid in his summing-up, and gave his verdict in an unhesitating voice.

(f.) A deputation waited on the candidate, and tried to extract his views on education.

4. Carefully distinguish the following idiomatic uses of "bear," and arrange them in such a way as to show their connection with the primary sense:—

He *bore* her no malice.

Some styles can *bear* ornament.

He could not *bear* to think of it.

It *bears* the date 1473.

We must grin and *bear* it.

His zeal *bore* down all opposition.

The winter *bore* heavy on the aged.

The argument *bears* upon the question.

This fact is *borne* in upon the electors.

He *bore* away for the harbour.

The range *bears* southwards for many miles.

The soil *bears* well.

He had *borne* himself well in the affair.

The deed *bore* witness to his integrity.

Bear me a hand, please.

This dynasty *bore* rule in the land.

The ratio which population *bears* to capital.

5. (a.) There are instances of bad logic, obscurity, false antithesis, involution, want of proper emphasis, dislocation, tautology, pleonasm, bad idiom, archaism, monotonous repetition, mistaken sequence of tenses, in the following passage: point them out;

(b.) State clearly in your own words the meaning of the passage;

(c.) Write out the meaning in brief sentences, and with as close an adherence to the original phraseology and sequence as avoidance of the faults pointed out will allow:—

“It was a great misfortune to the king, and which always attends courts which labour under great wants and necessities, that, whilst the greatest union imaginable amongst the few friends he had was necessary, and of too little power to buoy him up from the distresses which overwhelmed him, there was yet so great a faction and animosity amongst them, that destroyed any the most probable design that could offer itself; as it now fell out with reference to Scotland, which, if united, might yet be able to give reputation at least, if not a vigorous assistance, to the king’s interest.”

6. Write an essay of not more than two pages of foolscap on any *one* of the following, paying attention to the proper introduction and conclusion, sequence, correct idiom, well-arranged sentences, and paragraphing:—

(a.) The bearing of the theory of evolution on education.

(b.) “There is a tide in the affairs of men
Which, taken at the flood, leads on to fortune.”

(c.) “’Til fares the land, to hastening ills a prey,
Where wealth accumulates and men decay.”

(d.) “The breezy call of incense-breathing morn.”

(e.) The character of any historical personage as treated by an English historian, dramatist, or novelist.

7. Punctuate the following, and put capital letters where required:—

Marianne exclaimed it is too much oh willoughby could this be yours cruel cruel nothing can acquit you elinor nothing can whatever he might have heard against me ought he not to have suspended his belief the lock of hair repeating it from the letter which you so obligingly bestowed on me that is unpardonable willoughby where was your heart when you wrote those words oh barbarously insolent elinor can he be justified no marianne in no possible way and yet this woman who is she who can she be.

8. As a test of spelling, write words dictated by the Supervisor.

Part of a Paper on English Grammar and Composition.—For Class D.

Words for Spelling.—Dilettanteism, lymphatic, camellia, paraffin, halcyon, ichthyosaurus, papiermaché, caoutchouc, knickerbockers, haricot, rhapsody, bacchanal, turquoise, palæontology, diaphragm, hydrangea, numismatics, embarrassment, ophicleide, farrago, fricassee, etiquette, metempsychosis, dénouement, hydatids.

English Grammar and Composition.—For Class E, and for Junior Civil Service.

Time allowed: 3 hours.

1. As a test of spelling, write the words dictated by the Supervisor. [Candidates are requested to number the words, to write them in a column, and to use a separate sheet of paper for the spelling exercise. The words must be written distinctly. No marks will be given for any word that contains a doubtful letter.]

2. Distinguish between sex and gender; and mention, with examples, the different ways of denoting gender in English.

3. What are participles, and why are they so called? Trace the history of English participial forms.

4. Why is it insufficient to define conjunctions as “connective words”? Classify conjunctions, and give *one* example under each head.

5. Give, with meanings, an alphabetical list of Latin prefixes occurring in English words, and assign to each prefix a few English words in which it occurs.

6. Define the terms *phrase*, *clause*, and *sentence*. Classify (1) sentences, and (2) clauses; point out the peculiarity of each class, and give *one* example of each.

7. Parse the words in italics in the following sentences:—

(1.) *Both* are rascals.

(2.) I had *but* a few shillings.

(3.) She is fond of *dancing*.

(4.) Give *him* my compliments.

(5.) *The* more the merrier.

(6.) Beware lest sin *surprise* thee.

(7.) I said *that that that that* you used was superfluous.

8. Rewrite the following sentences in correct English:—

(1.) Johnson’s “Lives of the Poets” are reprinting.

(2.) I do not doubt but that he will come.

(3.) There has been three famous talkers in Great Britain, either of whom would illustrate what I say.

(4.) The fact of you having said so is enough for me, especially as your source is reliable.

(5.) One indiscriminating eulogist calls Burke the most profound and comprehensive of political philosophers who has yet existed in the world.

9. Write a short essay on *one* of the following subjects :—

- (1.) Christmas in New Zealand.
- (2.) Women's franchise.
- (3.) Pleasures of reading.

[Great attention to expression, punctuation, and neatness of form is expected in the essay.]

10. Punctuate the following passage, and put capitals where they are required: most of the history that we have of Europe before the birth of Christ is the history of the Greeks and Italians they were not the only nations in ancient Europe there were other great races such as the Gauls and our own forefathers the Germans why is it that ancient history tells us so much about the Greeks and the Italians and so little about these because while the Greeks and Italians learnt to live in cities and made reasonable laws and governments and grew rich by trade these other nations remained savage and ignorant if we knew their history during those times it would not interest us but while the northern races were still barbarous the Greeks and Italians had begun to live more like modern nations and had done great deeds whose effects last to this day.

[Candidates are requested to write the punctuation exercise on a separate sheet of paper. No marks will be given for any point unless it is quite distinct.]

Part of a Paper on English Grammar and Composition.—For Class E, and for Junior Civil Service.

The Supervisor will be so good as to read through and then slowly dictate the following words, afterwards reading the whole of them again to afford opportunity for correction :—

Hybrid, posthumous, euphemism, paradigm, lapidary, homicide, niece, anarchical, fuchsia, arctic, commodious, quintessence, acknowledgment, singeing, cue, synecdoche, homologous, receipt, agnosticism, fugue.

[The Examiner will be much obliged if the Supervisor will kindly draw the attention of candidates to the directions given under Questions 1, 9, and 10.]

English.—For Senior Civil Service. Time allowed: 3 hours.

PAPER No. 1.—COMPOSITION AND PRÉCIS.

1. Rewrite the following :—

He said to his patient that if he did not feel better in half an hour he had better send for him again; by which remark he designed to induce him to take care of himself: but he who is naturally reckless is hard to persuade to caution, which was seen in the case of which I am speaking—a good instance that that which a man will not do for himself he will not do at another's bidding. [Put the doctor's remark in the first person, and express the whole in two sentences, ending the first at "caution."]

2. Write an essay on one of the following subjects :—

The character of Henry the Fifth.

The humour and the pathos of Charles Lamb.

The Archbishop's speech in "Henry V.," comparing the conduct of the State to the government of honey-bees.

3. Make an abstract of the accompanying correspondence. The abstract should give the date of each letter, the name of its writer and of the person addressed, and, in as few words as possible, its subject.

4. Write a *précis* (i.e., a brief and clear statement in narrative form) of the same correspondence.

No. 1.

SIR,—

Wellington, New Zealand, 16th June, 1892.

In reply to paragraph three of your letter of 18th March, dealing with the question of attracting small farmers with capital to the colony, I have the honour to inform you that the Government concurs in the views expressed in your letter with respect to the introduction of immigrants of the farmer class who possess more or less capital, and they would be willing to assist desirable persons desiring to settle in New Zealand by affording to them every information in their power, and by approaching the different shipping companies with a view of inducing them to grant passages to this class of settlers at reduced rates.

It is deemed advisable that the benefits which would accrue to settlers of the farmer class, together with the advantages which this colony offers to such colonies, should be advertised somewhat in the manner you have suggested, and particular attention should be given to the distribution of these advertisements in the provinces from whence we may expect to draw settlers who would come under the heading of farmers. It is believed that the colony could absorb a considerable number of farmers who possess capital varying from, say, £300 to £5,000, the more so as there is a tendency at the present time to subdivide the estates held by large proprietors in this country, which thus offers to that class of immigrants who, from age, habit, or want of colonial experience, are unfitted for coping with the pioneer work of subduing the wilderness, chances of securing partly improved farms, where their experience may be of benefit to them.

Intending settlers should be asked to show that they were possessed of some means, and to produce some form of guarantee as to the amount of capital owned by them, and possibly the course pursued by your predecessor under the same circumstances would equally meet the present case. In addition, there should be procured satisfactory evidence as to the character and general suitability of the people for colonists. Then, the Government think the shipping companies would come to some arrangement with you, whereby the passage-money could be reduced, as it would be impossible for the colony at present to provide money for such a purpose.

It does not appear necessary to confine the time during which passages may be given in this manner to the ten months that the shipping companies offer facilities to emigrants, so long as the companies are satisfied with the arrangements entered into.

You could, no doubt, enter into specific arrangements with the shipping companies trading to this colony, and insure that a proper dietary scale, medical attendance, &c., are established, in which you will find assistance from the arrangement made by your predecessor under somewhat similar circumstances. The mode of payment for the passages would be subject to the same arrangements as formerly, without any assistance from the colony.

In communications with intending settlers it will be necessary to insist upon the fact that those who desire to settle on Crown lands should be informed that they will be practically confined in their choice to forest lands, which have to be cleared and sown with grass before any return can be expected, and, moreover, that the lands that the Crown has to offer are, with few exceptions, confined to those suitable for pastoral purposes, but which may, nevertheless, be held in areas varying from 200 to 2,000 acres. You will see from this that farmers who have had some experience in pastoral pursuits are the most suitable class so far as settlement on Crown lands is concerned, even on the Crown lands clear of forest in the South Island, and that, therefore, special attention should be given to advertising in those parts of the United Kingdom where pastoral pursuits prevail.

The course of action, therefore, the Government think it most advisable you should pursue is to advertise extensively throughout the United Kingdom (the cost of which will be defrayed by the Government); giving all the information available concerning the colony; then, when suitable settlers come forward expressing their willingness to go to the colony, and show to your satisfaction that they are possessed of a certain amount of means, it will be for you, having previously arranged with the shipping companies, to see that they are provided with tickets for their passages at reduced rates. In entering into negotiations with the shipping companies, it is suggested that you should fully place before them the advantages which will accrue to themselves by offering inducements to a most desirable class of people to emigrate and settle in the colony, a class of people who will almost immediately become producers in the colony, and naturally help to swell the business of the shipping firms trading to New Zealand.

I have, &c.,

J. BALLANCE.

The Agent-General for New Zealand, London.

No. 2.

SIR,—

13, Victoria Street, London, S.W., 14th August, 1892.

I have the honour to acknowledge the receipt, by the San Francisco mail which was delivered here on the 21st ultimo, of letter (not dated) from the Minister of Lands, communicating to me the views of the Government with reference to the proposals I submitted for consideration in the third paragraph in my letter No. 336, of the 18th March last, and, in reference thereto, to state that I have placed myself in communication with the shipping companies for the purpose of endeavouring to make arrangements with them for a reduction in the amount of passage-money as regards persons who may be recommended to them by me as eligible for such assistance, it being understood that the Government, on their part, will advertise extensively throughout the United Kingdom, for the purpose of inducing suitable persons to proceed to the colony by the companies' direct steamers.

Owing to the absence from London of many persons who have to be consulted in this matter, I have not yet been able to come to any definite arrangement, but I trust will be able to do so shortly.

I have, &c.,

The Hon. the Premier.

W. B. PERCEVAL.

No. 3.

SIR,—

13, Victoria Street, London, S.W., 14th September, 1892.

Adverting to my letter of the 14th ultimo, in which I had informed you that I had placed myself in communication with the shipping companies for the purpose of endeavouring to make arrangements with them for a reduction of the amount of passage-money for persons with capital going out to the colony, as instructed in your letter delivered here on the 21st July, and also informed you that, owing to the absence from London of many persons who had to be consulted, I was unable to make any definite arrangement: I beg to state that the matter is still in abeyance, for the reason given above, but I hope to be able to resume my negotiations in a few days. I had such difficulty in inducing the shipping companies to agree to reduce their fares on the scale sketched in my letter of the 18th March last that I fear that, now that your Government decline to make any money-contribution towards passage-money, I shall have still greater difficulty. I shall, of course, make strong point of the authority you have given me to advertise extensively, and of the increase of business which it is hoped will accrue to the shipping companies.

With regard to the advertising, I have not thought it expedient to take any steps in this direction until I have concluded some arrangement with the shipping companies. I have, however, availed myself of an offer made to me by Mr. J. R. Randerson, of Christchurch, New Zealand, who

is now on a visit to this country, to distribute information regarding the colony in the provincial districts where the persons most suitable for colonial settlers are to be found. Mr. Randerson's private business necessitated his visiting a large number of farming centres in England and Ireland, and I have paid him the sum of £25 for the manuscript of three lectures he has written on New Zealand (six copies of which have been forwarded to you in the mail-box shipped by the s.s. "Rua-pehu," sailing this week); and at a cost of a further sum of £25 I have had 5,000 copies printed. These are forwarded in parcels of 250 to Mr. Randerson as he travels through the country, and he sees to their distribution. I understand that Mr. Randerson delivers lectures on the colony, and exhibits lime-light views of New Zealand; and that he proposes to expend the whole of the money I have paid for his manuscript in expenses connected with these lectures. I have, however, refused to identify myself, or connect the Government of the colony in any way, with these lectures, as I have not a sufficient knowledge of his abilities or prudence to warrant such a course. I shall, however, watch with no little interest the result of his lectures.

I am pleased to state that the demand for information regarding the colony made by apparently desirable persons has considerably increased since the opening of the Information Bureau. No efforts are being spared in giving full and accurate information, and a large amount of printed matter is freely circulated.

The Hon. the Premier.

I have, &c.,

W. B. PERCEVAL.

No. 4.

SIR,—

13, Victoria Street, London, S.W., 19th January, 1893.

In accordance with the instructions contained in your (Minister of Lands') letter of July last, I have lost no opportunity of endeavouring to make arrangements under which reduced passages would be provided for suitable settlers, conditionally on the Government, at their own cost, advertising extensively throughout the United Kingdom.

A few weeks after the despatch to you of my letter No. 1458, of the 13th October last, I had an interview on the subject, at their invitation, with Mr. Dawes and Mr. Jackson, two of the directors of the New Zealand Shipping Company, and, after several subsequent communications, their proposals were embodied in a letter, dated the 19th December last, copy of which I attach herewith.

Under the instructions contained in your letter of July, to which I have already referred, I felt that I should have been justified in at once accepting these proposals; but, as the New Zealand Shipping Company made it a condition that for the space of twelve months the arrangement in question should not, without their consent, be extended to vessels other than their own, I deemed it desirable to communicate with you before I finally accepted and acted on the proposals in question; and, in reply, therefore, I intimated that, subject to the ratification of the same by the Government, I was prepared to accept them. I accordingly sent you, on the 6th instant, a cablegram conveying to you the substance of the proposals; and on the 10th I received your reply to the effect that further conditions were necessary, and that you were accordingly communicating with me on the subject by letter.

With regard to our dealing with the New Zealand Shipping Company alone in this matter, I may observe that, the Shaw-Savill and Albion Company having declined to entertain the proposal I made to them in December last, and not having shown any inclination to renew the negotiations with respect to it, I consider the Government are at perfect liberty to make arrangements which would not extend to them: in fact, in my letter to them of the 28th September last, copy of which went with my letter to you of the 13th October, it was expressly stated that I felt myself free to approach other shipping companies on the subject.

I may also remark that I find that in other shipping arrangements the agreements have been made with the New Zealand Shipping Company only, with liberty, and, in some cases, with the understanding, that the company might carry the arrangement thus made into effect in combination with the Shaw-Savill and Albion Company.

With respect to the proposals themselves, I would point out that, in addition to providing reduced rates for second- and third-class passengers, the company are prepared to grant reductions to first-class passengers—an arrangement which has, I think, never before been made. I attach some value to this, as the effect will be, I believe, to attract to the colony persons possessing capital, in addition to those going by the second and third class.

A new feature also, to which I would specially refer, is providing an intermediate class. I have reason to believe that this provision will encourage the settlement in the colony of a class of men who, having with thrift and care possessed themselves of small amounts of capital, will go out with the determination to settle on the land, and, when there, make the most of the means which they take with them.

I would also advert to the proposal by which the company propose to contribute towards the expenses of advertising, proving as it does that they are anxious to co-operate with the Government in the endeavour to promote, as far as possible, the settlement of the country by a class of settlers who will do good to themselves and benefit also those who are already there.

In the selection of those whom I should, on behalf of the Government, deem right to recommend for reduced passages, I shall of course be guided by the instructions which I shall from time to time receive from you.

In my first despatch to you on the subject, dated 18th March, 1892, I endeavoured to indicate the class of persons whom I considered it desirable to encourage, and it would be my greatest care to avoid sending out unsuitable persons of any description, whether as regards character, health, or vocation. My aim would be principally to encourage those who, with either small or large capital, intend to take up land in the colony and utilise it for their own occupation.

I believe there is no great demand at the present time for mechanics or labourers in the colony, and I did not propose to recommend such; but the proposed arrangement would permit of my sending out any class of persons whom the Government from time to time might consider required in the colony. With the exception of persons possessing capital, and persons having a special and practical knowledge of farming, the only other class which it seems to me the colony at present requires is capable domestic servants, and these, unless otherwise instructed, I should propose to encourage.

It seems to me that the proposal made by the company might be accepted with great benefit to the colony, and I hope the Government will see its way to give me the necessary instructions.

The Hon. the Premier, Wellington.

I have, &c.,

W. B. PERCEVAL.

Enclosure in No. 4.

SIR,—

138, Leadenhall Street, London, E.C., 19th December, 1892.

Since the company addressed to you their letter of the 29th September last, they have carefully considered whether they can extend the offer which they then made of giving some concession from their published rates of passage-money, in any special cases which may be recommended by you.

It is understood, in the first place, that, provided the company take passengers approved by you by their Direct steamers to New Zealand at reduced rates, you will extensively advertise in the United Kingdom to that effect. And under these conditions, and provided also that the passengers thus approved are for a period of twelve months sent only through this company, I beg to inform you that the rates for passengers will be reduced, as follows, viz.: Saloon passengers, special terms, taking each case on its merits; second-class, from £36 15s. to £28 per adult; third-class, from £16 16s. to £13 per adult.

In addition to the above it is proposed to have an "intermediate" class, which would afford a larger amount of space per adult than is made available for third-class, and in which enclosed cabins and a more liberal dietary scale would be provided, and for this class of accommodation the passage rate will be £18 18s. to those passengers only who are approved by yourself.

With regard to the space for "intermediate" passengers, the company are prepared to allot 25ft. per adult, it being remembered that under the Passengers Act the minimum space is 15ft. only; and as regards the dietary scale the details could, no doubt, be satisfactorily arranged after a conference with yourself.

In further reference to this matter, I would further add that the company are prepared to contribute towards the expense of advertising to the extent of 5 per cent. of the amount of passage-money received by them on account of the passengers approved by yourself.

It is also to be understood that the company will pay a commission of not less than 5 per cent. to you, or your shipping agent, to cover agency charges.

Awaiting your approval of the proposals contained herein,

I remain, &c.,

THOMAS JOHNSON,

Director, New Zealand Shipping Company.

The Agent-General for New Zealand.

No. 5.

(Telegram from the Agent-General to the Premier.)

6th January, 1893.

SHIPPING Company offers reduced fares 25 per cent. passengers recommended Agent-General. We advertise and forward passengers Shipping Company only. Shipping Company offers 5 per cent. passage-money contribution advertising. Arrangement run for twelve months. Recommend acceptance. Instruct whether may agree.

No. 6.

(Telegram from the Premier to the Agent-General.)

Wellington, 10th January, 1893.

SHIPPING further conditions necessary. Writing.

No. 7.

SIR,—

Wellington, 31st January, 1893.

Referring to your telegram of the 6th instant, stating the terms on which the Shipping Company will forward passengers to New Zealand who may be recommended by yourself, the Government views your proposal favourably, but is of opinion that the concession should be restricted to persons possessing capital somewhat as follows: Each head of a family should prove to your satisfaction that he is possessed of £100 in cash, and that he is also possessed of cash equal to the sum of £50 for each member of his family over twelve years of age.

Subject to the above you may enter into an arrangement with the Shipping Company for twelve months, and advertise as you propose.

I have, &c.,

JOHN MCKENZIE,

For Premier.

The Agent-General for New Zealand, London.

English.—For Senior Civil Service. Time allowed: 3 hours.

PAPER NO. 2.—LITERATURE AND BOOKS.

1. On what authority did Shakespeare rely for the facts as set forth in his play of "Henry V."? Is there anything in the play to indicate when it was produced, and whether it preceded or followed the plays about Henry VI.?

2. How does Shakespeare distinguish the characters of the three rogues—Pistol, Bardolph, and Nym? What do we hear of the fate of any of them? How did Pistol's braggart talk get him into trouble?

3. By whom and on what occasions were the following said?—

(a.) List his discourse of war, and you shall hear
A fearful battle render'd you in music.

(b.) If it be a sin to covet honour
I am the most offending soul alive.

(c.) Nice customs curt'sy to great kings.

(d.) Base is the slave that pays.

And explain the meaning of—

(a.) It is no English treason to cut French crowns; and to-morrow the king himself will be a clipper.

(b.) No woman shall succeed in Salique land.

(c.) Thou diest on point of fox.

(d.) The farced title running 'fore the king.

(e.) Enough, captain; you have astonished him.

4. How does Lamb account for his imperfect appreciation of Scotchmen; and what intellectual qualities, the opposite of his own, does he attribute to them?

5. What does Lamb tell us about Christ's Hospital in the olden time, or of Mrs. Battle as a card-player, or of Quakers? [*One only.*]

6. From which of the Essays of Elia are the following passages taken? Point out how they illustrate any distinctive features of Lamb's character or literary style:—

How beautiful to a genuine lover of reading are the sullied leaves and worn-out appearance, nay, the very odour (beyond Russia), if we would not forget kind feelings in fastidiousness, of an old "circulating library" "Tom Jones" or "Vicar of Wakefield"! How they speak of the thousand thumbs that have turned over their pages with delight!—of the lone sempstress whom they may have cheered (milliner or harder-working mantua-maker) after her long day's needle-toil, running far into midnight, when she has snatched an hour, ill spared from sleep, to steep her cares, as in some Lethean cup, in spelling out their enchanting contents.

In the Negro countenance you will often meet with strong traits of benignity. I have felt yearnings of tenderness towards some of these faces—or rather masks—that have looked out kindly upon one in casual encounters in the streets and highways. I love what Fuller beautifully calls these "images of God cut in ebony." But I should not like to associate with them, to share my meals and my good-nights with them—because they are black.

I feel these audits but too powerfully. I begin to count the probabilities of my duration, and to grudge at the expenditure of moments and shortest periods, like misers' farthings. In proportion as the years both lessen and shorten, I set more count upon their periods, and would fain lay my ineffectual finger upon the spoke of the great wheel. I am not content to pass away "like a weaver's shuttle." These metaphors solace me not, nor sweeten the unpalatable draught of mortality. I care not to be carried with the tide that smoothly bears human life to eternity; and reluct at the inevitable course of destiny.

7. "The literature of Queen Anne was, with a few exceptions, a party literature." Illustrate this statement, and refer to one class of literature, for which this period is remarkable, that forms a very distinct exception.

8. Who wrote "The Battle of the Books," "Cato," "The Tatler," "The Rape of the Lock"? State something of the purport of each.

Arithmetic.—For Class D. Time allowed: 3 hours.

1. What is the nearest whole number to one million which is exactly divisible by 234? Resolve into its prime factors 217560, and find the highest common factor of this number and 58719.

2. Reduce to its simplest form $\frac{(5\frac{1}{2} - 2\frac{1}{4}) \times .3029}{.454 - (2 - 1\frac{1}{2})} + \frac{.538461}{3\frac{1}{3}}$.

3. Calculate, correct to four places of decimals, the value of each of the expressions,—

$$1 + \frac{1}{4} + \frac{1 \times 4}{4 \times 8} + \frac{1 \times 4 \times 7}{4 \times 8 \times 12} + \frac{1 \times 4 \times 7 \times 10}{4 \times 8 \times 12 \times 16} + \&c.$$

$$1 + \frac{2}{6} + \frac{2 \times 5}{6 \times 12} + \frac{2 \times 5 \times 8}{6 \times 12 \times 18} + \frac{2 \times 5 \times 8 \times 11}{6 \times 12 \times 18 \times 24} + \&c.$$

4. If one gramme contain 15.43235 grains, find the number of grammes in a pound avoirdupois. Express a gramme as a decimal of a pound troy.

5. Two places are both situated in latitude 45°, and the difference of their longitudes is 25° 16' 25": how many miles must a man travel in going from one to the other along the 45th parallel of latitude, assuming that the number of miles in a degree in latitude 45° is found by multiplying the length of a degree at the equator by $\frac{1}{\sqrt{2}}$?

6. A man sold a piece of land for £2,265 8s., and lost 8 per cent. on his purchase-money: at what price would he have had to sell it to gain 7 per cent.?

7. Find the discount on £2,484 11s. 10½d., due 2 years hence, at 7½ per cent. compound interest.

8. A bath which has vertical ends is 6ft. 6in. long, 2ft. deep, and 2½ft. wide at the top and 1½ft. wide at the bottom, and its sides are planes. Find how many gallons of water it will hold, assuming that a gallon of water contains 277½ cubic inches.

Also find the cost of completely lining it with lead a square foot of which weighs 6½lb., and which costs 3½d. per pound.

9. A man has a sum of money in the 4-per-cent. stock which gives him an income of £500 a year. When the stock is at 102½ he sells out, and invests £5,400 in the 5-per-cent. at 108, and the remainder in the 3-per-cent. stock. If his income be £10 a year less than formerly, find the price of the 3-per-cent.

10. If 6 men do 6006 of a piece of work in 1.76 hours, how long will it take 3 boys to finish it, it being known that 3 men and 7 boys have done a similar piece of work in 3 hours?

11. A workman finds that he has to spend 80 per cent. of his earnings on the bare necessities of life. In consequence of an increase in the tariff, his wages rise 20 per cent., and the cost of everything he buys rises 25 per cent.: compare the purchasing powers of the sums of money which he is able under the two systems of taxation to devote to purposes other than buying necessities.

Examine in the same way the case of a richer person who had originally to spend 30 per cent. out of his income on necessities, and whose income is increased 10 per cent. by the new tariff.

12. At an election there were two candidates, A and B. According to the promises of votes, A expected to have a majority of 50; but, A having polled only 80 per cent. of his promises, whilst B polled 87½ per cent. of his promises, B was elected by a majority of 50. How many votes did each candidate actually get?

Arithmetic.—For Class E, and for Junior Civil Service. Time allowed: 3 hours.

1. A person has an income of £200, and pays 4d. in the £1 income-tax: when 2½d. in the 11b. is taken off sugar, what must be his yearly consumption that he may just save his income-tax?

2. Show that in every division the dividend is greater than twice the remainder. Show also that any number having 2, 1, and 6 for the last three figures is divisible by 72, provided that the sum of the remaining digits is divisible by 9.

3. Find the G.C.M. of 47154 and 172347, and the L.C.M. of 28, 136, 357, 595, 4760.

4. Find the value of $\frac{5}{3\frac{1}{2}}$ of $5\frac{1}{2}$ of £273 2s. 6d.;

and reduce $\frac{3\frac{1}{2}}{1\frac{1}{3}} \left\{ \frac{19}{120} \text{ of } £1 - \frac{7}{48} \text{ of } 1\text{s.} \right\}$ to the fraction of 29s.

5. What is the least factor which will make the product of the first 10 natural numbers a perfect square?

6. Find the value of $.1 \times .1 \times .1 \times .1 \times .1 \div .00125$; and of 2.86805 of 3s. + 8.3 of 4s. — 1.8 of 5s.

7. What will it cost to paint the outside of a cubical box, whose edge is 4.5ft., at 1.16s. per square yard?

8. A man buys a lot of apples, half at four a penny and half at two a penny, and retails the lot at three a penny: what is his gain or loss per cent.?

9. A cubic foot of water weighs 1,000oz., and the weight of a given volume of air equals the weight of the same volume of water $\times .00125$. Find the weight of air in a room 34ft. long, 16ft. wide, and 7.5ft. high.

10. The gross receipts of a railway company in a certain year are apportioned as follows: 43 per cent. to pay working-expenses, 52 per cent. to pay a dividend of $3\frac{1}{4}$ per cent., and the remainder, £25,000, is reserved. Find the paid-up capital of the company.

11. A train starts from B at 15 miles an hour; two hours later another train follows at the rate of 25 miles an hour: at what distance from B will it overtake the first? and what interval of time will elapse between the passing of the two trains through a station 30 miles from B?

12. How much stock at 92½ must be sold to pay a bill of £715 17s., due 9 months hence, at 4 per cent.?

Arithmetic.—For Senior Civil Service. Time allowed: 3 hours.

1. Multiply £4,279 13s. 8½d. by 14; also multiply the same sum of money by 9, and by 5, respectively, and add the last two results.

2. What is meant by the symbol $\frac{3}{4}$? Show that the quantities represented by $\frac{3}{4}$, and by $\frac{2}{1\frac{1}{2}}$, are equal.

3. Simplify—

$$(a.) \left(8\frac{5}{18} + 9\frac{19}{27} + 17\frac{11}{36} \right) - \left(\frac{13}{40} + 2\frac{11}{30} \right);$$

$$(b.) \left(3\frac{1}{4} \text{ of } 1\frac{1}{3} \right) + \left(2\frac{1}{2} - \frac{1}{3} \right) \text{ of } \left(3\frac{1}{2} - \frac{1}{4} \right).$$

4. Divide 10.836 by 51.6. Also divide 1083.6 by 5.16, and also by .00516. Prove each result by vulgar fractions.

5. Divide £2,025 among five persons—A, B, C, D, E—so that A's share is half of B's, B's share is to C's as 4 to 5, C's share is to D's as 5 to 6, and D's share is to E's as 3 to 4.

6. What is meant by rate per cent.? Find the compound interest on £64,000 for 3 years at 5 per cent. per annum.

7. A can do a piece of work in 27 days, and B in 15 days. A works at it for 12 days alone, B then works at it for 5 days alone, and C takes 4 days to finish it. In how many days could C do the whole work alone?

8. A room whose height is 14ft., and whose floor is an exact square, contains 3363·5 cubic feet. Find the cost of carpeting the floor with carpet costing 4s. 6d. a yard. Find also the area of each wall.

9. Find, by Practice, the cost of 7cwt. 1qr. 15½lbs. at £2 0s. 7d. per cwt.

10. What sum must be vested in 3-per-cent. stock, at 92½, to produce an income of £450? Which would be the better investment—this, or the purchase of gas shares at £217, on each of which a dividend of £7 5s. is paid annually?

11. If 144 men can dig a trench 480yds. long, 1ft. 6in. broad, and 4ft. deep, in 3 days of 10 hours each, how long must another trench, 5ft. deep and 2ft. 3in. wide, be that 51 men may dig it in 15 days of 9 hours each?

Geography.—For Class D. Time allowed: 3 hours.

1. Explain fully what is meant by the precession of the equinoxes. How is it caused?
2. Describe the phenomena of the tides, and show how they are caused. Why is high water nearly four hours later at Onehunga than at Auckland, although the distance between the two places is less than six miles?
3. State the respective lengths of the equatorial and polar diameters of the earth; show how the difference was caused, and state some of the results which arise from it. Describe an experiment to illustrate your reply.
4. Write a descriptive essay on the following localities: The Auckland Isthmus, the Canterbury Plains, the Sounds district of Marlborough, and the Ruahine Range.
5. Give a brief account of Siam, and state in what way the proposed acquisition of a large portion of its territory by France is likely to affect British interests.
6. Give an account of the chief physical features of Palestine, and illustrate your statement by a sketch-map. Indicate the position of the chief cities and celebrated places.
7. Describe the Caspian Sea; state its position, and name the countries washed by its waters.
8. Describe New Guinea as fully as you can, and state the approximate boundaries of the Dutch, German, and British possessions. What are its chief natural productions?
9. What are the chief agencies by which the distribution of plants and animals has been effected? Name instances in which the introduction of plants and animals into New Zealand has been injurious.
10. State the geographical range of the following plants and animals as fully as you can: Vine, sugar-cane, rice, cotton, tea, date-palm, nutmeg, cocoa-nut; antelope, opossum, wolf, kangaroo, elephant, tuatara, kiwi.

Geography.—For Class E, and for Junior Civil Service. Time allowed: 3 hours.

1. On what days of the year are day and night of equal length all over the world, and why? What are the phenomena of sunrise and sunset, and of day and night, at the North Pole?
2. At what season of the year is the earth nearest to the sun, and what is the approximate distance at that period?
3. Describe the mode of formation of coral reefs and atolls.
4. Draw a sketch-map of the South Island of New Zealand. Show the position of the chief mountain-ranges, lakes, plains, harbours, chief towns, coal-mines, and goldfields.
5. Describe as fully as you can the course and the most striking physical features of a New Zealand river which rises on the eastern side of a lofty mountain-range and discharges on the western.
6. Write a short note on each of the following places: Leeds, Gore, Vienna, Calais, Nassau, Herat, Napier, Cork, Sitka, Strasbourg, Leipzig, Dundee, and Belgrade.
7. State the approximate position of Cape Comorin, Cape York, Cape Maria van Diemen, Cape Vincent, Cape Breton, Cape Clear, Cape Horn, Cape Farewell, Cape Barrow.
8. What and where are the Pamirs, and by what countries are they respectively claimed?
9. Describe the boundaries of France, Chili, Germany, European Turkey, and Switzerland. State the position of three important cities in each.
10. Trace the course of the three rivers which you consider to be the most important in the world. State the reasons for your selection, and indicate the position of the chief cities on their banks.

History.—For Class D. Time allowed: 3 hours.

[Candidates are expected to attempt all the questions.]

1. Give, with dates and references to leading names, an account of the influence of the Danes on English history.
2. Summarise the chief events in the reign of Edward I.
3. Narrate the events that led to the formation of the reformed Church of England.
4. Sketch the history of the Long Parliament.
5. Describe (1) the Petition of Right, and (2) the Declaration of Right.
6. Give some notion of the state of English politics in the reign of Queen Anne. Mention the chief writers of the time, and point out their intimate relation to contemporary politics.
7. Describe the aims and career of Robert Walpole.
8. Write, with dates and historical references, two paragraphs on the success of Great Britain as a colonising power.
9. Explain the following: Reform of the Calendar; Chartists; Witena-gemot; Plantation of Ulster; Triennial Act; "Thorough;" Letters of Junius; East India Company; South-Sea Scheme; Triple Alliance.

English History.—For Class E, and for Junior Civil Service. Time allowed: 3 hours.

1. Give the principal events in the Hundred Years' War between England and France. When were the treaties of Bretigny and Troyes made? What were their provisions?
2. Explain the general causes of the rising of the peasants in 1381.
3. Mention any occasions on which England was in either friendly or hostile relations with Scotland during the reigns of the Tudors.
4. What was the state of things that obliged the King to summon a Parliament in November, 1640? Who were the leading men in that Parliament? Give some account of its proceedings up to the outbreak of civil war.
5. What was the object of the Exclusion Bill? By whom was it chiefly supported? Give a sketch of subsequent events connected with this political struggle up to the Battle of Sedgmoor.
6. State briefly the part taken by English armies during the War of the Spanish Succession under Marlborough and in Spain. When and by what treaty was the war brought to a close? What Ministry was then in power in England?
7. Explain the circumstances in which W. Pitt (the younger) became Prime Minister.
8. Write a short sketch of the growth of British power in India in the time of Clive and Hastings.
9. What is meant by Catholic Emancipation? By what eminent public men was it advocated or opposed? When, and in what circumstances, was it finally agreed to?
10. Explain the chief defects in the system of representation before the Reform Act of 1832. What changes were then made?

History.—For Senior Civil Service. Time allowed: 3 hours.

1. "The Revolution of 1688 made the House of Commons the strongest thing in the State." Explain how this came about. By what measures during the reign of William III. did the House of Commons confirm and extend its powers?
2. Who was Sacheverell? Why was he impeached, and what political consequences followed?
3. In what respects did the Whigs and Tories differ in their views with regard to the Established Church? In connection with this subject, explain what was meant by "occasional conformity."
4. Describe the military movements that led to the Battle of Blenheim. What reasons are there for regarding the victory then gained as of special importance?
5. Give a short account of the administration of Sir Robert Walpole.
6. State what you know about the affairs in which Wilkes was concerned, and explain their importance.
7. Describe the condition of Ireland during the eighteenth century. What great change was made in 1782? What measures for the benefit of Ireland did W. Pitt (the younger) propose, and why was he not more successful in carrying them?
8. What was the state of things in England after the close of the great war against Napoleon? How did the public dissatisfaction find expression, and what attitude was taken by the Government?
9. How did the representation come to be arranged as it was before the Reform Act of 1832? What defects in the system of representation were dealt with by that Act? When and by whom had any previous attempts at Parliamentary reform been made?

Latin.—For Class D, and for Junior and Senior Civil Service. Time allowed: 3 hours.

1. Decline, in the singular number only, *equester ordo, velox cursus, major laus, unum opus*. Give the genitives and datives plural of *senex, virgo, lex, aetas*. Give the first person singular of the imperfect subjunctive of *possum, nolo, eo, venio, quatio*; and write out in full the imperative of *nolo*. Give the parts of *caveo, perdo, emo, traho, surgo, deleo, video, cognosco, fodio*. To what verbs do the following participles belong: *Nexus, illitus, suggestus, confertus*? Give the Latin for—fifteen, thirty-eight, fifty times, two thousand men, a million sesterces.
2. Translate—*Dixit urbem deletum iri*; and explain fully the syntax of the expression. Distinguish the meanings of *concedere* and *persuadere*—(1) when followed by an infinitive clause, (2) when followed by *ut* and the subjunctive. Give rules for the use of *quin*—(1) in principal clauses, (2) in subjoined clauses.
3. Translate into Latin—
 - (1.) Each man must use his own judgment.
 - (2.) Do not attempt to obtain friends by flattering.
 - (3.) Can you doubt that it is the duty of a good man to assist his country in time of danger?
 - (4.) I do not know whether he ought to be considered more worthy of praise or blame.
 - (5.) They were afraid that the reinforcements (*subsidia*) would not arrive soon enough.
 - (6.) Our soldiers, having slain many of the enemy, returned to the camp.
4. Translate—

Caesar, Pompeianis ex fuga intra vallum compulsis nullum spatium perterritis dare oportere existimans, milites cohortatus est ut beneficio fortunae uterentur castraque oppugnarent. Qui, etsi magno aestu (nam ad meridiem res erat perducta), tamen ad omnem laborem animo parati imperio paruerunt. Castra a cohortibus, quae ibi praesidio erant relictæ, industrie defendebantur, multo etiam acrius a Thracibus barbarisque auxiliis. Neque vero diutius qui in vallo constiterant multitudinem telorum sustinere potuerunt, sed confecti vulneribus locum reliquerunt, protinusque omnes

ducibus usi centurionibus tribunisque militum in altissimos montes, qui ad castra pertinebant, confugerunt.

[NOTE.—*Cohors*, a cohort, the tenth part of a legion; *confecti*, weakened; *vallum*, a rampart; *protinus*, straight away.]

French.—For Class D, and for Junior and Senior Civil Service. Time allowed: 3 hours.

1. (a.) Expound the rules concerning the formation of the plural of compound nouns; and translate—lieutenant-colonels, rainbows, young ladies, master-keys, grandmothers, poultry-yards.

(b.) When do proper names vary in form? Translate—The two Corneilles were born at Rouen. A glance of the eye from Louis produced (*enfantait*) Corneilles.

(c.) Give six French nouns which have no singular, and also their equivalent in English.

2. (a.) Explain succinctly the rules concerning the article. Translate—Germany, Austria, and Italy are allied; the Rhine; the Alps; I speak French; I have not read the history of Henry the Fourth.

(b.) When is a noun taken (1) in a general sense, (2) in a particular sense, (3) in a partitive sense? Illustrate by translating—The gardens of New Zealand are beautiful. Flowers are the ornament of gardens. Modesty is amiable. We have good friends (*fem.*). We have no money.

3. (a.) How are comparatives of equality, superiority, and inferiority formed before adjectives? Give an example for each case.

(b.) Give the plural masculine and feminine for the following adjectives, and also their equivalent in English: Petit, bas, doux, jumeau, libéral, bancal, théâtral, aigre-doux, nouveau-né.

(c.) Give the different meanings in English for—Un grand homme, and, Un homme grand; Une commune voix, and, Une voix commune; Un galant homme, and, Un homme galant; Le grand air, and, L'air grand; Un plaisant homme, and, Un homme plaisant.

4. (a.) When are "he is," "she is," and "it is" translated by "c'est"? Give examples.

(b.) When is "which" or "that" translated by "qui," and when by "que"? Give an example for each case.

(c.) Translate—We have seen the baroness and him. In a year she wrote to me only once. One should take care of one's self. I have not seen her for a long time.

5. (a.) Give the third person singular and first and second plural (i.) of the present and future (indicative mood), (ii.) of the present (subjunctive mood), of the following verbs: manger, appeler, tenir, vouloir, croire, croître, naître, vaincre, mourir.

(b.) Translate—Did you receive the letter I sent you this morning?—I did. Have you seen them (*fem.*) at church?—I saw them there.

6. (a.) Form adverbs from—utile, aisé, beau, nouveau, bon, heureux, prudent, gentil.

(b.) What prepositions do the following verbs require before an infinitive?—Aider, apprendre, achever, avoir garde, chercher, conseiller, se déterminer, négliger. Give the meanings of these verbs in English.

(c.) Translate—Why do you get shaved?—Because I can't shave myself. It is beginning to grow late; I must go.

7. (a.) Translate—I heard that you had two hundred pounds at the bank; is it true?—No, I had only eighty.

(b.) When are the past participles *joint* and *inclus* preceded by *ci* variable, and when are they invariable? Translate—(i.) You will find annexed the copy of the letter which Mr. — has written to me. (ii.) I recommend to you the five letters enclosed.

8. (a.) Translate—I beg of you. I beg to inform you. Receive my thanks. I take this opportunity.

(b.) Give the corresponding English idioms for—Être au fait; être à la veille de; être brouillé avec; être d'avis; se connaître en quelque chose. Cet orateur bat la campagne. C'est un homme comme il faut.

9. Translate into English—

LE TESTAMENT EXPLIQUÉ.

Un marchand fort riche, qui n'avait qu'un fils unique, fit son testament, par lequel il donna tout son bien, qui montait à neuf cent mille francs, à certains religieux, les laissant libres de donner à son fils telle somme qu'ils voudraient. Le marchand meurt: les religieux s'emparent de tout, sans vouloir presque rien donner à l'héritier. Ce dernier se plaint et les *fait venir* devant le vice-roi, qui, ayant lu le testament, demanda aux religieux ce qu'ils offraient au fils. "Vingt mille francs," répondirent-ils. "Vous voulez donc le reste?"—"Oui, monseigneur; nous demandons l'exécution du testament."—"Cela est juste," dit le vice-roi; "mais vous l'entendez mal. Il est dit que le fils aura ce que vous voudrez; la succession est de neuf cent mille francs; vous en donnez vingt à l'héritier; c'est donc huit cent quatre-vingt mille francs que vous voulez. Eh, bien! suivant la clause du testament, cette somme appartient au fils. Je vous ordonne de la lui rendre; les vingt mille francs restants seront pour vous." *Il fallut en passer par là.*

[*Fait venir*, summons; *entendez*, understand; *il fallut en passer par là*, they had to submit to the decision.]

10. Translate into French—

The worthy Malesherbes (Minister of Louis XVI.), at the head of a sovereign court, had been deputed to harangue the Dauphin in his cradle, who, far from understanding a single word of the address, could only cry out and shed tears to express his wants and his griefs. He, the Minister, contented himself with saying: "May your Royal Highness, for the happiness of France as well as your own, always show yourself insensible and deaf to the language of flattery, as you are this day to the discourse which I have the honour of pronouncing before you."

German.—For Junior and Senior Civil Service. Time allowed : 3 hours.

1. Translate into English—

Zur Zeit des Tiberius fuhr ein Schiff nahe an den Inseln Parä, welche an der Küste von Aetolien liegen, des Abends vorüber. Die Leute, die sich darauf befanden, waren noch nicht schlafen gegangen, und viele sassen nach dem Nachtessen beim Trinken, als man auf einmal von der Küste her eine Stimme vernahm, welche den Namen des Thamus (so hiess nämlich der Steuermann) so laut rief, dass Alle in die grösste Verwunderung geriethen. Beim ersten und zweiten Rufe schwieg Thamus, beim dritten antwortete er; worauf dann die Stimme mit noch verstärktem Tone diese Worte zu ihm sagte: "Wenn du auf die Höhe von (*when you are off*) Palodes anlangst, so verkündige, dass der grosse Pan gestorben ist!" Als er nun diese Höhe erreichte, vollzog Thamus den Auftrag, und rief von Hintertheil des Schiffes nach dem Lande hin: "Der grosse Pan ist todt!" Auf diesen Ruf erfolgten von dorthier die sonderbarsten Klagetöne, ein Gemisch von Seufzen und Geschrei der Verwunderung, und wie von Vielen zugleich erhoben. Die Augenzeugen erzählten dies Ereignis in Rom, wo man die wunderlichsten Meinungen darüber äusserte. Tiberius lies die Sache näher untersuchen und zweifelte nicht an der Wahrheit.

Also—

Der nächste Morgen war so glorreich, dass er auch wohl ein noch schwerer verdüstertes Herz als das meinige hätte aufhellen können. Ueberdies war ich, müde wie ich war, so schnell entschlummert, nachdem ich kaum mein junges, sorgenvolles Haupt auf's Kissen gelegt, und hatte so fest geschlafen, ich musste mich ordentlich erst darauf besinnen, was mich denn gestern Abend nur so ausser mir gebracht hatte. Nach und nach fiel es mir freilich wieder ein, und da wurde mir die Stirn heiss, das weite Zimmer zu eng, es litt mich nicht mehr zwischen den Wänden, ich hatte, wie immer in meinen Nöthen, das Gefühl dass draussen unter dem blauen Himmel Alles besser werden müsse, und ich eilte die steile Hintertreppe hinab in den Park.

2. Translate into German—

- (1.) It is very warm to-day; I hope it will not rain.
- (2.) I can do nothing, because the ink is so bad.
- (3.) Somebody has taken my book. Was it you?
- (4.) If you have any apples in your garden, bring me some to-morrow.
- (5.) At what o'clock did you come home yesterday?
- (6.) It was exactly half-past ten as I came to the door of the house.
- (7.) Go to bed at once; you must be very tired.
- (8.) Has anybody lost this pocket-handkerchief? Yes, it is mine.
- (9.) I received a letter from my aunt this morning; she is very unwell.
- (10.) Children who are at school should write at least once a week to their parents.
3. (1.) Translate—half a glass of wine; both my brothers; so large a mountain; what a wonder! all the day.
- (2.) Give the meaning and the first person singular of the imperfect of—*frieren, laufen, wachsen, sinnen, heben*.
- (3.) Give the meaning and the second person singular of the imperative of—*sehen, nehmen, lesen, blasen, sterben*.
- (4.) Show the gender of words ending in *chen, lein, heit, keit*, and derivatives ending in *ling*, by giving one example for each of these terminations, with the appropriate definite article. Give also the meaning of your examples.
- (5.) Mention some prepositions which are placed after the word they govern.
- (6.) Translate into German—elsewhere, backwards, upwards, on the way, frequently.
- (7.) Show by examples the meaning of *hin* and *her*.
- (8.) Decline *der*, relative pronoun, in full.
- (9.) Give the meaning of the following words, also the nouns for the feminine corresponding to them: *der Junggesell, der Deutsche, der Russe, der Wolf, der Eber*.
- (10.) Translate—two days ago, twice a week, at the most, at least, at the latest.
- (11.) Attach the appropriate preposition to the following adjectives, and give their meaning: *bange, eitel, fruchtbar, fähig, verschwenderisch*.
- (12.) What prepositions do the following verbs severally require?—*zweifeln, warten, bestehen, sorgen, zielen*. Give their meaning.
- (13.) Translate—on horseback; with all my heart; to weep with joy; this day week; from experience; for ever.
- (14.) State which case the following prepositions govern: *laut, gegenüber, wegen, ohne, ausser*.
- (15.) Give the German for the adverbial conjunctions—besides, accordingly, nevertheless, rather, otherwise.

Algebra.—For Class D, and for Junior Civil Service. Time allowed : 3 hours.

1. If $a = 0$, $b = -\frac{1}{2}$, $c = \frac{1}{3}$, $d = -\frac{1}{4}$, find the numerical value of $a^2b - \frac{bcd}{2} + \frac{b^2c}{3} - \frac{c^2d}{4}$, and of $\sqrt{12(-b^2cd+1)} + \sqrt{a^2b - \frac{c^2d}{4}}$.

2. Divide—

$$\frac{a^6}{6} + \frac{3a}{4} + \frac{57a^3}{70} - \frac{7a^5}{40} - \frac{19a^4}{420} - \frac{13a^2}{21} - 1 \text{ by } \frac{a^2}{3} + 1 - \frac{3a}{4}.$$

3. Resolve into elementary factors—

$$15x^2 - 26x + 8; x^6 - 64; (x - y - xy)^2 - (x + y)^2.$$

4. Reduce to their simplest forms—

$$\frac{3a-2}{5} \left\{ a-2(b+4c) + 3(2a-b) \right\} + 4(a-\overline{2b-c});$$

$$\frac{2a-3b}{5} - \frac{1}{3} \left[3b - \frac{3a-c}{2} - \left\{ 2a - \frac{3b-2c}{5} - \frac{2b-(a-2c)}{3} \right\} \right].$$

5. Find the highest common factor of
- $4a^4 - 9a^2b^2 + 30ab^3 - 25b^4$
- and
- $6a^3 + 5a^2b - 6ab^2 + 35b^3$

6. Simplify—

$$\frac{x}{1+\frac{x}{y}} - \frac{y}{1-\frac{y}{x}} - \frac{2x}{1-\frac{x^2}{y^2}};$$

and

$$\frac{\frac{1-b}{1+b} - \frac{1-a}{1+a}}{1 + \frac{(1-a)(1-b)}{(1+a)(1+b)}}.$$

7. Solve the equations,—

$$3x - \{2x+8 - (3x-10)\} = 6x+4 - \{3x-4 - (16-2x)\};$$

$$\frac{4x-5}{7\frac{1}{2}} - \frac{5x-8}{8\frac{1}{2}} = \frac{x-5}{9\frac{1}{2}};$$

$$\frac{b+c-a}{ax+bc} = \frac{c+a-b}{bx+c}.$$

8. A man possessed £2,500; he invested part of it in the 4-per-cent. stock at 96, and the remainder in the 6-per-cents at £117. If his income was £116 13s. 4d. per annum, find how much he invested in each kind of stock.

9. In a school the number of boys bears to the number of girls the ratio of a to b ; if the number of boys be increased by b , and the number of girls by a , the ratio is that of c to d . Find how many boys and how many girls there are in the school.

Algebra.—For Senior Civil Service. Time allowed: 3 hours.

1. If
- $a = 1$
- ,
- $b = 2$
- ,
- $c = 3$
- , find the values of—

$$(1.) \sqrt[3]{a^3 + b^3 + 3abc};$$

$$(2.) \sqrt{\frac{a^2 + c^2 - b^2}{2a^2 + 2c^2 + b^2}} + \sqrt{\frac{4b^2 + c^2 - a^2}{2b^2 + 2c^2 - 2a^2}}.$$

2. State the rule of signs in multiplication. Prove it by the example of the multiplication of
- $a-b$
- into
- $c-d$
- .

Multiply $2x^4 - 3x^3 + x^2 - 1$ by $2x^4 + 3x^3 - x^2 - 1$.

3. Prove the rule for finding the highest common factor of two algebraical expressions. Find the highest common factor of

$$2x^3 + 5x^2 - x - 6 \text{ and } 2x^4 + 3x^3 - 2x - 3.$$

4. Reduce to their simplest forms—

$$(1.) \frac{2x^3 + 5x^2 - x - 6}{2x^4 + 3x^3 - 2x - 3};$$

$$(2.) \frac{a^3}{(a-b)(a-c)} + \frac{b^3}{(b-a)(b-c)} + \frac{c^3}{(c-a)(c-b)};$$

$$(3.) \left(\frac{a+b}{a-b} + \frac{a-b}{a+b} \right) \div \left(\frac{a+b}{a-b} - \frac{a-b}{a+b} \right).$$

5. Prove that, if a rational integral algebraical expression of the form
- $ax^4 + bx^3 + cx^2 + dx + e$
- have the value zero, when
- x
- has the value
- p
- the expression must be exactly divisible by
- $x-p$
- . Find the factors of—

$$(1.) a^2(b-c) + b^2(c-a) + c^2(a-b);$$

$$(2.) a^3(b-c) + b^3(c-a) + c^3(a-b).$$

6. Solve the equations,—

$$(1.) \frac{2x+5}{7} + \frac{5+3x}{5-3x} = \frac{6x+8}{21} + \frac{13}{3};$$

$$(2.) \frac{x-3}{x-4} + \frac{x-6}{x-7} = \frac{x-4}{x-5} + \frac{x-5}{x-6}.$$

7. Solve the equations,—

$$\begin{cases} ax + by = c, \\ a'x + b'y = c', \end{cases}$$

and from your result, or otherwise, find the values of x and y which satisfy the equations $7x + 4y = 37$, $15x - 7y = 17$.

8. Two men, A and B, run a race over a given course. If A have ten yards start, they arrive at the end of the course together. If they start together from the beginning of the course, B will arrive at the end $\frac{1}{2}$ seconds before A does. Find how many yards A can run in a minute. If it be also given that B can run the whole course in five minutes, find the length of the course, and B's rate of running.

9. A certain fraction becomes $\frac{1}{3}$ if its denominator be increased by 8, while if its numerator be doubled, and its denominator increased by 3, it becomes unity.

10. Simplify—

$$(1.) \left(y - \frac{a^2 - xy}{x - y} \right) \left(x + \frac{a^2 - xy}{y - x} \right) + \left(\frac{a^2 - xy}{y - x} \right)^2;$$

$$(2.) \frac{a - x}{a + x} + \frac{4ax}{a^2 - x^2} + \frac{a + x}{a - x}.$$

11. Show that—

$$(1.) 1 + n + \frac{1}{2}n(n + 1) + \frac{1}{6}n(n + 1)(n + 2) = \frac{1}{6}(n + 1)(n + 2)(n + 3);$$

$$(2.) (a^2 + b^2 + c^2)(x^2 + y^2 + z^2) = (ax + by + cz)^2 + (bz - cy)^2 + (cx - az)^2 + (ay - bx)^2.$$

Euclid.—For Class D, and for Junior Civil Service. Time allowed: 3 hours.

1. Explain the terms—postulate, proposition, problem, perpendicular, parallel, perimeter, polygon, projection.

2. If the three sides of one triangle be respectively equal to the three sides of another triangle, the two triangles shall be equal in every respect.

3. Prove that—

(1.) The straight lines which join the extremities of equal and parallel straight lines, towards the same parts, are themselves equal and parallel.

(2.) The straight lines which join the extremities of equal and parallel straight lines, towards opposite parts, bisect one another.

(3.) If two intersecting lines bisect one another, the lines joining their extremities form a parallelogram.

4. Triangles on the same base, and between the same parallels, are equal in area.

Triangles on the same base, but on opposite sides of it, are equal in area if the line joining their vertices be bisected by the common base.

5. On a given straight line to describe a parallelogram which shall be equal to a given triangle, and have one of its angles equal to a given angle.

6. Having given the sum of the diagonal and side of a square, to construct the square.

7. If a straight line be divided into two equal and also into two unequal segments, the sum of the squares on the two unequal segments is double the sum of the squares on half the line and on the line between the points of section.

If a straight line be divided into two segments, when is the sum of the squares on the two segments the least possible?

8. To describe a square which shall be equal to a given rectilineal figure.

Euclid, Books I.—IV.—For Senior Civil Service. Time allowed: 3 hours.

1. How many parts of one triangle must in general be given equal to the corresponding parts of another, in order that the equality of the remaining parts may be insured?

Prove that, if one side of one triangle be equal to one side of another, and the angles adjacent to the equal sides be also equal, each to each, then the remaining sides of the one are equal to the remaining sides of the other triangle.

2. Define a parallelogram. Prove that the opposite sides and angles of parallelograms are equal.

Prove that if the two diameters of a parallelogram are equal its angles must be right angles.

3. What is a rectangle?

Prove that, if a straight line be divided into two parts, the square on the whole line is equal to the sum of the rectangles contained by the whole line and each of the parts.

4. Show how to find the centre of a given circle.

Find the centre of a circle of which a portion only is given.

5. Define a segment of a circle; the angle in a segment.

Prove that the angle in a semicircle is a right angle, and the angle in a segment less than a semicircle is greater than a right angle.

6. Show how to draw a straight line through an external point to touch a circle.

Prove that two such straight lines can be drawn, and that they are equal in length.

7. Show how to inscribe a circle in a given triangle.

Prove that the three bisectors of the angles of a triangle meet in a point.

8. Construct an isosceles triangle having each of the angles at the base double of the vertical angle.

Mechanics.—For Class D, and for Junior and Senior Civil Service. Time allowed: 3 hours.

1. Define the terms *moment, momentum, couple, energy, power, fluid, metacentre.*

2. Define the units of force and work.

Find the force which must be applied to a mass of 1 ton in order to give it in 15 seconds a velocity of 60ft. per second. Find also the work done by the force in the last 5 seconds.

3. Prove that the velocity, v , of a body starting from rest under the action of a constant force is given by the formula $v^2 = 2fs$, where s is the distance which the body has traversed, and f is the constant acceleration.

A ball thrown vertically upwards returns to the hand after 5 seconds. Neglecting the resistance of the air, find the initial velocity of the ball, and the height to which it has risen.

4. Enunciate and prove the "polygon of forces."

5. A uniform beam, 18ft. long and weighing 60lb., rests upon two supports, which are 5ft. distant from the ends of the beam: find the pressures upon the supports when a weight of 40lb. is placed upon one end of the beam.

6. Find the position of the centre of gravity of a plane triangular lamina of uniform thickness.

7. What force, acting horizontally, will be necessary to support a weight of 80lb. on a smooth inclined plane, the height of which has to its length the ratio of 3:5? and what will be the pressure on the plane?

8. Show that the pressure at any point within a liquid which is free from external pressure is proportional to the depth of the point below the surface of the liquid.

Find the pressure per square inch at the depth of 18in. in mercury, the specific gravity of mercury being 13.6.

9. Describe the common air-pump.

10. A sovereign weighs 123 grains, and loses in water 6.63 grains of its weight: find its specific gravity. It consists of eleven parts of pure gold, of specific gravity 19.3, and one part of alloy: find the specific gravity of the alloy.

Physics.—For Class D, and for Junior and Senior Civil Service. Time allowed: 3 hours.

1. A cubic foot of water at 20° C. is cooled down until it is completely frozen. Describe the changes which take place in its volume. Assuming that the weight of the water is 62½lb., calculate the quantity of heat which it has given out.

2. What is meant by the specific heat of a substance? Is the specific heat of a substance affected by change of temperature, or by change of state?

A quantity of small shot, weighing 20oz., is raised to the temperature of 100° C., and thrown into 18oz. of water at 10° C. If the resulting temperature is 13° C., find the specific heat of lead.

3. Describe the cryophorus, and explain the principles which it illustrates.

4. Give an account of the diatonic musical scale. If the vibration number of C is 258, what are the vibration numbers of F and A?

5. Define "refractive index" and "critical angle." Show how to construct the critical angle for a substance the refractive index of which is $\frac{3}{2}$. Explain the phenomenon of mirage.

6. Explain how a beam of white light may be resolved into its constituent colours by means of a prism. Draw a diagram showing the course of the rays, and the order of the spectral colours.

7. What is meant by the "magnetic meridian" and the "magnetic dip"? Rods of steel, soft iron, and copper are placed with their lengths parallel to the magnetic dip, are tapped with a hammer when in this position, and are then removed: state the effects, if any, which are produced in each case.

8. You desire to show that the electrical density is greater at the apex than on the plane base of a charged metal cone. What apparatus would you require, and how would you conduct the experiment?

9. State Ohm's law.

How many bichromate cells, each having an E. M. F. of 2 volts and an internal resistance of $\frac{1}{4}$ ohm, will be required to give a current of 0.32 ampere through an external resistance of 24 ohms?

Chemistry.—For Class D, and for Junior and Senior Civil Service. Time allowed: 3 hours.

1. Show, by equations, the effect of heat on the following compounds: (1) *Phosphoric acid*, (2) *sulphuric acid*, (3) *ammonic chloride*, (4) *potassic chlorate*, (5) *peroxide of hydrogen*, (6) *phosphorous acid*.

2. Describe (giving the equations) a process for the manufacture of *ammonia* from the ammoniacal liquor of gasworks.

3. Describe fully (giving the equations) the manufacture of *sulphuric acid* on the large scale; or, the manufacture of *phosphorus* from bones.

4. Arrange the nonmetallic elements in vertical columns under the following heads: *Monads*, *dyads*, *triads*, *tetrads*, *pentads*, *hexads*, *heptads*.

5. Required about half a litre of each of the following gases: (a) *Nitrous oxide*, (b) *nitric oxide*, (c) *carbonic oxide*, (d) *carbonic anhydride*, (e) *sulphur dioxide*, (f) *chlorine*. Show how you would make and collect them.

6. A colourless gas in a clear glass jar is known to be one of the following: *Oxygen*, *nitrous oxide*, *nitric oxide*, *carbonic anhydride*, *hydrogen*. How would you determine which of them it is?

7. Express in grammes the weight of 100 litres of each of the following gases at normal temperature and pressure (0° C. and 760mm.): *Oxygen*, *chlorine*, *nitrogen*, *nitrous oxide*, *ammonia*, *carbon dioxide*. [1 litre of hydrogen at normal temperature and pressure = .0896 gramme.]

8. State what you know of the allotropic forms of *sulphur*, or of *phosphorus*.

9. Enunciate the following laws:—

(1.) Dalton's law of "constant proportion."

(2.) Dalton's law of "multiple proportion."

(3.) Dalton's law of "reciprocal proportion."

(4.) Avogadro's "law of volumes."

(5.) The law of the "diffusion of gases."

*Elementary Biology.—For Class D, and for Senior and Junior Civil Service.
Time allowed : 3 hours.*

[Candidates are requested to answer questions in one subject only.]

ANIMAL PHYSIOLOGY.

1. Describe the general form and structure of the vertebral column, and show how they are related to its functions. Describe in detail the characters of some one vertebra.
2. Give an account of the structure and various functions of the skin. Describe as far as you can the microscopic appearance of a section of skin.
3. When the diaphragm of a rabbit is exposed and an opening made in it on one side, the lung of that side may be seen to collapse immediately. Why does it do so, and what light does this throw on the manner in which respiration is effected?
4. What are the characters of glandular tissue? Mention the chief glands of the body, and state their functions.
5. Describe the course of the circulation of the blood. What are the functions of the blood-corpuscles?
6. Describe the chief kinds of connective tissue in the body. Compare their properties, and give examples of their distribution in various parts of the body according to the function of the part.
7. Describe the structure of the spinal cord and the arrangement of the spinal nerves.
8. What are the general physiological properties of nerve? What is reflex action? Describe experiments which illustrate your answer.

BOTANY.

1. What are the functions of roots, and by what characters are they distinguished? Describe the chief kinds of roots.
2. Explain how plants obtain their carbon. What parts of the plant are concerned in the process, and what is their structure? Describe experiments which illustrate your answer. Mention some of the chief carbon compounds in the plant.
3. What is a fibro-vascular bundle, and of what tissue-elements is it composed? Explain how a dicotyledon increases in length and thickness.
4. How is water absorbed by the plant? Give an account of the movements of water in the plant.
5. What is a fruit, and how does it differ from a seed? In what plants is the part popularly recognised as the seed really a fruit? Distinguish between true and spurious fruits, and give examples.
6. Explain in what way it is advantageous for plants to have some means of distributing their seed, and describe some of the chief modifications to insure the dispersal of seeds.
7. Describe the usual structure of a stamen. Mention the natural orders known to you in which the number and arrangement of the stamens are characteristic.
8. Explain the following terms, and name plants which illustrate them: Perigynous, adnate, capitulum, spadix, glume, apocarpous, bract, umbel, monœcious.

Shorthand—Senior.—For Senior Civil Service. Time allowed : 3 hours.

INSTRUCTION TO SUPERVISORS.

1. Inform candidates before the time for taking up this subject that they may use pen or pencil as they please for taking notes, which should be written on ruled paper, but that they must transcribe those notes into longhand with pen and ink.
 2. Inform candidates that when once you have commenced to dictate you cannot stop until the passage is finished.
 3. Dictate the passages at the following rates of speed :—
 - (a.) 80 words per minute.
 - (b.) 120 " "
 - (c.) 150 " "
- N.B.—It will be well to practise reading these aloud some time beforehand, looking at a watch or clock, so as to accustom yourself to reading at the exact rate indicated.*
4. Candidates are at liberty to take down one, two, or three passages, as they choose. All the passages required by candidates are to be dictated before any one begins to transcribe; and there should be as little delay as possible between readings.
 5. Inform candidates that rapidity in transcribing notes into longhand is essential, and note carefully on the transcribed copy the exact time taken in transcription. Candidates must not look at their notes while a passage that does not concern them is being read.
 6. Inform them also that the clearness and accuracy of the shorthand notes (which must in every case be sent in attached to the transcript) will be taken account of by the examiner; and that they must not alter the shorthand notes after the dictation is finished.

* The matter to be read is marked off into sections, each of which is to occupy a minute. The Supervisor will perhaps find it advisable to mark it off into smaller sections, each containing the number of words to be read in fifteen seconds, and to read one section every quarter of a minute. As the candidates hear the passage read only once, the reader's articulation ought to be very clear, and the candidates ought to be so placed as to be able to hear well.

PASSAGES FOR DICTATION.

(a.) At the rate of 80 words per minute. Takes 10 minutes.

Well, all I can say is that, while my friend took exception to the way in which the Statement was compiled, he did not endeavour to follow the practice which he advocated by words; because, I think, on reference to his speech he will find that he dealt with a great many subjects that had nothing whatever to do with the Financial Statement, or with finance. I cannot help saying that my honourable friend's speech seemed to be remarkable for the very thing that he condemned. I should like to mention the points to which the honourable gentleman referred. I will give but a few of them. He stated that my Budget was not finance: I say that his speech was not finance. He said there were too many subjects dealt with in the Financial Statement. I say there were too many subjects referred to in his speech. I may refer to some of the subjects which the honourable gentleman touched upon. He started with an old Greek, and then went on to Shakespeare; then he spoke of Jack and the Physic and the Pancake, and from him went on to George Washington; then he referred to "The Fabian Essays"; he passed from them, and entered a travelling circus; he then introduced us to Richard the Second and Wat Tyler; from them he passed on to old Selden, the great English lawyer; and then he interspersed a financial disquisition with a little of Goschen, Gladstone, and Harcourt; then he took us back to Cromwell, and next introduced us to a doctor of divinity; then he interviewed Hamilton and Northcote; next we found ourselves in France with Beaulieu; from him he took us to the sweet by-and-by; and after that he passed into the infernal regions, and there I leave him. If the honourable gentleman complains of my range of subjects, I think I may fairly complain of his range of subjects. The honourable gentleman also commented upon my attitude in delivering the Financial Statement. He said that I turned my back to the Commons. I think I maintained the same position that I am doing now. But it did occur to me, when my honourable friend was quoting Gladstone, Goschen, and other notable men, that perhaps he is aspiring to a seat in the House of Commons, because when the honourable member is practising in this House, and giving us a little Goschen and Gladstone in New Zealand finance, I fancy his mind must be carried somewhat far away. He said that the Financial Statement was crowded with instances of how people make mistakes; and he indicated some of the mistakes. He said careless things were done. My honourable friend has discussed many Financial Statements in this House. He discussed one last year, and discovered how things had been done wrong then. He discovered that, in consequence of its being leap-year, there was an extra day, and that the Treasurer received an extra £11,000; but the honourable gentleman forgot there was an extra day's expenditure and forgot to deduct the day's expenditure from the day's receipts. And last night he also conveniently forgot some most important matters. For instance, he stated that the estimates in connection with the interest showed an error of £14,000. But I may tell the House that there is nothing at all wrong about the Statement on this point. We have to provide for the payment of interest on the guaranteed debentures lying in London with the bankers for emergency purposes: but, no emergency having arisen, those debentures were never used, and consequently the £14,000 was not required. The interest had to be included in the estimates as a precautionary measure, to be paid if necessary. The honourable gentleman will see that, as far as that is concerned, there is nothing in his argument. Then the honourable member referred to the conversion of £400,000, and alluded to the fact that £20,000 increased capital was not shown. I may tell the House that the operation by which this £400,000 was turned into £420,000 results in a saving of £150,000 during the currency of the loan; and yet he complains and is not satisfied. I think the House will see, therefore, that the honourable gentleman was somewhat unfair in his criticism. The honourable member also said that the £414,000 surplus was incorrect. I wondered in what respect it was so, and I interrogated him at the time. He said he would deal with that, but he finished his speech and never alluded to it again.

(b.) At the rate of 120 words per minute. Takes 10 minutes.

Title: "Omega: the Last Days of the World." The scene is laid in Paris several hundred years hence, and the article deserves, and will receive, considerable attention as an interesting exercise of the scientific imagination.

The scene is laid in Paris, which has telephonic communication with the observatories on all the highest peaks in the world. The story opens at the time when the life of the great capital is paralysed by the intimation of the rapid approach of a comet thirty times the size of the world.

The following extracts from the chief astronomer's speech give an account as to what would happen if a comet like that of 1811 were to collide with the earth:—

The destruction of the world will result from the combustion of the atmosphere. For about seven hours—probably a little longer, as the resistance to the comet cannot be neglected—there will be a continuous transformation of motion into heat. The hydrogen and the oxygen, combining with the carbon of the comet, will take fire. The temperature of the air will be raised several hundred degrees; woods, gardens, plants, forests, habitations, edifices, cities, villages, will all be rapidly consumed; the sea, the lakes, and the rivers will begin to boil; men and animals, enveloped in the hot breath of the comet, will die asphyxiated before they are burned, their gasping lungs inhaling only flame.

If our latitude were to receive the first shock of the comet, reaching us, we will suppose, in summer, the Tropic of Cancer, Morocco, Algeria, Tunis, Greece, and Egypt would be found in front of the celestial onset, while Australia, New Caledonia, and Oceania would be the most

favoured. But the rush of air into this European furnace would be such that a storm more violent than the most frightful hurricane and more formidable even than the air-current which moves continuously on the equator of Jupiter, with a velocity of 400,000 kilometres per hour, would rage from the Antipodes towards Europe, destroying everything in its path. The earth, turning upon its axis, would bring successively into the line of collision the regions lying to the west of the meridian first blasted. An hour after Austria and Germany it would be the turn of France, then of the Atlantic Ocean, then of North America, which would enter somewhat obliquely the dangerous area about five or six hours after France—that is, towards the end of the collision.

The terrestrial globe being thus entirely surrounded by the cometary mass for nearly seven hours, and revolving in this incandescent gas, the air rushing violently towards the centre of disturbance, the sea boiling and filling the atmosphere with new vapours, hot showers falling from the sky-cataracts, the storm raging everywhere with electric deflagrations and lightnings, the rolling of thunder heard | above the scream of the tempest, the blessed light of former days having been succeeded by the mournful and sickly gleamings of the glowing atmosphere, the whole earth will speedily resound with the funeral knell of universal doom, although the fate of the dwellers in the Antipodes will probably differ from that of the rest of mankind. Instead of being immediately consumed, they will be stifled by the vapours, by the excess of nitrogen, the oxygen having been rapidly abstracted, or poisoned by carbonic oxide; the fire will afterwards reduce their corpses to ashes, while the inhabitants of Europe and Africa will have been burned alive. The well-known tendency of carbonic oxide to absorb oxygen will doubtless prove a | sentence of instant death for those farthest from the initial point of the catastrophe.

M. Camille Flammarion breaks off his story with an interruption, caused by the announcement that the inhabitants of Mars were photophoning to the earth, and the meeting was adjourned in order to ascertain what it was that they had to say.

In the June number, M. Flammarion brought the comet into collision with the world. But the end of the world was not to happen till the August number. The catastrophe described in the opening chapter was but the preliminary canter as it were. Here is the French astronomer's picture of what happened when the comet struck the earth:—

Already the cometary fringes had invaded the | lunar orbit. At any moment they would reach the rarer limits of the earth's atmosphere, only 200 kilometres away.

Then every one beheld, as it were, a vast conflagration, kindled over the whole extent of the horizon, throwing skyward little violet flames. Never before had the earth been bathed in such a light, which at first seemed to be colourless, emitting lightning flashes from its pale and wan depths. The dryness of the air, hot as the breath of a furnace, became intolerable, and a horrible odour of sulphur, probably due to the superelectrified zone, poisoned the atmosphere. Every one believed his last hour was at hand.

A terrible cry dominated every other sound. The earth is on fire! | The earth is on fire! Indeed the entire horizon was now illuminated by a ring of bluish flame, surrounding the earth like the flames of a funeral pile. This, as had been predicted, was the carbonic oxide, whose combustion in the air produced carbonic anhydride.

Suddenly, as the terrified spectator gazed silent and awe-struck, holding his very breath in a stupor of fear, the vault of heaven seemed rent asunder from zenith to horizon, and from this yawning chasm, as from an enormous mouth, were vomited forth jets of dazzling greenish flame, enveloping the earth in a glare so blinding that all who had not already sought shelter, men and women, the old and the young, the bold as | well as the timid, all rushed with the impetuosity of an avalanche to the cellarways, already choked with people. Many were crushed to death, or succumbed to apoplexy, aneurismal ruptures, and wild delirium resulting in brain fever.

Although at the instant of collision the greater part of the hemisphere on the side of the comet had been affected by the constricting dryness, the suffocating heat, and the poisonous sulphurous odours, as well as by deadening stupor, due to the resistance encountered by the comet in traversing the atmosphere, the supersaturation of the ozone with electricity, and the mixture of nitrogen protoxide with the upper air, the other hemisphere had experienced no other disturbance than that which followed inevitably from | the destroyed atmospheric equilibrium. Fortunately, the comet had only skimmed the earth, and the shock had not been central. Doubtless, also, the attraction of the earth had had much to do with the fall of the bolides in Italy and the Mediterranean. At all events, the orbit of the comet had been entirely altered by this perturbation, while the earth and the moon continued tranquilly on their way about the sun, as if nothing had happened. The orbit of the comet had been changed by the earth's attraction from a parabola to an ellipse, its aphelion being situated near the ecliptic. Later statistics of the comet's victims showed the number of the dead was one-fortieth of the population of Europe. |

(c.) At the rate of 150 words per minute. Takes 5 minutes.

If one may judge from current talk in Anglo-Canadian circles, Canada is very much in earnest in her efforts to promote closer trade relations with Australasia. Following up her parliamentary subsidy of £25,000 per annum to the new line of steamers which Messrs. Huddart, Parker, and Co. are running between Sydney and Vancouver, the Canadian Government now intend to send a Commissioner—probably the Minister of Trade and Commerce himself—to Australasia, and the Boards of Trade at Toronto, Montreal, Warra, Victoria, and Vancouver have all been holding meetings to discuss the best method of utilising this extension of Canada's connections in the Pacific Ocean. Trial shipments of Australian fruit and

produce have been well received in Canada, and should the Dominion Government remove the duty on wool, as they are said to intend, there will be an opening for that commodity also.

- 1 Canadians on the other hand expect to find a market in Australasia for those commodities which now find their way from San Francisco. In canned fruits, lumber, hard wheats for mixing purposes, agricultural machinery, and the like, Canadians claim that they can more than hold their own as against the United States, now that direct steam-communication is established. As yet the Imperial Government have not seen fit to adopt the new Canadian-Australasian steamers as armed cruisers in time of war, but the Canadian Government are pressing the subject upon the attention of the Admiralty through Sir Charles Tupper, the Canadian High Commissioner, and fully expect before long to secure for the Vancouver-Sydney line the same cruiser allowance as is made to the China and Japan mail-steamers crossing the Pacific from Vancouver. As yet the New South Wales Government is the only
- 2 Australasian authority which has given practical support to the line in the shape of a subsidy of £10,000, but the Canadians regard the new route as of interest to New Zealand and all the Australian Colonies, opening up as it does new channels of trade, and the only wholly British route to England.

The *Canadian Gazette*, the semi-official organ of the Canadian Government, published here in London, has much to say of the "making friends with Australasia." In its issue of to-day it remarks, "It must not be imagined that those who have inaugurated this new service have done so from motives of pure philanthropy. Far from it. Mr. Huddart and Mr. Ward have been touring through Canada, as business-men whose faith is based upon clear-headed notions of the £ s d aspect of the question. In appealing to the Governments in each of the

- 3 countries concerned, they have made it clear that the route has distinct climatic and speed advantages for the traveller between Australasia and Europe, and for the mails as well. A fast ship on the Atlantic and a special train on Canada's transcontinental line could deliver a London mail at Vancouver in ten days, and a rapid but possible service on the Pacific could convey the mail from Vancouver to Sydney in fifteen or sixteen days. Speed for speed, this would beat the Suez route by several days. Equally obvious is it that it is of great advantage to each component part of the Empire to have it command this wholly British route to the Antipodes. No one need be reminded how precarious communication *via* the Suez Canal must be in times of difficulty, and transit by the San Francisco route may at any time be denied
- 4 to British passengers, mails, and cargo. The trade aspect of the question is necessarily in the experimental stage as yet, but all the information gathered by the promoters during their Canadian tour and the experience of the voyages yet made suggest that the reversed seasons, different climates, and varying natural wealth of the two continents will afford an ample and profitable basis of exchange. Moreover, unless some speakers in the New South Wales Assembly are misinformed, the Canadian Government has expressed its readiness to modify the Canadian tariff in such a way as to encourage trade connection. There is also the prospect of Canadian commerce with the Sandwich Islands, for, despite the political influence which the United States has succeeded in gaining in Hawaii, there is no reason why San Francisco should hold 89 per cent. of a trade much of which may be carried on even more satisfactorily with Canada.
- 5 Altogether, Canadians have reason to feel satisfied."

Shorthand—Junior.—For Junior Civil Service. Time allowed: 3 hours.

INSTRUCTIONS TO SUPERVISORS.

1. Inform candidates before the time for taking up this subject that they may use pen or pencil as they please for taking notes, which should be written on ruled paper, but that they must transcribe those notes into longhand with pen and ink.

2. Inform candidates that when once you have commenced to dictate you cannot stop until the passage is finished.

3. Dictate the passages at the following rates of speed:—

- (a.) 50 words per minute.
- (b.) 80 " "
- (c.) 100 " "

N.B.—It will be well to practise reading these aloud some time beforehand, looking at a watch or clock, so as to accustom yourself to reading at the exact rate indicated.*

4. Candidates are at liberty to take down one, two, or three passages, as they choose. All the passages required by candidates are to be dictated before any one begins to transcribe; and there should be as little delay as possible between the readings.

5. Inform candidates that rapidity in transcribing notes into longhand is essential, and note carefully on the transcribed copy the exact time taken in transcription. Candidates must not look at their notes while a passage that does not concern them is being read.

6. Inform them also that the clearness and accuracy of the shorthand notes (which must in every case be sent in attached to the transcript) will be taken account of by the examiner; and that they must not alter the shorthand notes after the dictation is finished.

* The matter to be read is marked off into sections, each of which is to occupy a minute. The Supervisor will perhaps find it advisable to mark it off into smaller sections, each containing the number of words to be read in fifteen seconds, and to read one section in every quarter of a minute. As the candidates hear the passage read only once, the reader's articulation ought to be very clear, and the candidates ought to be so placed as to be able to hear well.

PASSAGES FOR DICTATION.

(a.) At the rate of 50 words per minute. Takes 10 minutes.

Do you mean to say handing over to three men for five years the management of your lines is likely to give more control than if they were controlled by Ministers who are actually under your eyes, and are continually to be questioned by you? You must have more control over Ministers than over Commissioners; and do you mean to say that the Commissioners you have appointed are necessarily more able men than you can pick out as Ministers? That is not saying much for the democracy, or the intellect, of New Zealand, if that is so. What, then, is there left? The question we have left to face is this: Are we fit to have railways at all? Now, to refer to a man who is a railway expert. I refer to W. M. Acworth, whose book on railway tariffs ought to be read by every member of the House dealing with the question of railway management. He says that the very fact of railways being handed over to Commissioners means that the State ought not to have railways at all; the logical conclusion is, that if the State, through its Government, is not fit to manage its lines, the State ought not to have constructed them, and ought to have left the construction of them to private parties. Now, we are, then, practically face to face with this question: Ought the State to control the carrying of passengers and goods by railways, or ought it to hand over this function to private parties? I can understand the State doing what is done in France—leasing the railways to private companies. I can understand the State saying this is not a State function, and giving up both the construction and the control of railways. I can understand its having control of the railways through ordinary government—which is its Parliament and its Ministers. But I cannot understand such a system as this. The very existence of the present system is an open admission that the government of the people in the form we now possess it has been a failure, and requires to be altered. One or two words to show the wider bearing of this question. What is the whole tendency of the government system of to-day? The whole tendency is in the direction of the increase of State functions. We have increased our State functions in New Zealand further, perhaps, than has been done in most countries. We have our Government Insurance scheme, our Public Trust Office, our Post-Office Savings-bank. What does all this mean? It means, no doubt, additional care being required; additional burdens being thrown upon Ministers; additional responsibilities cast upon the House of Assembly; and, no doubt, additional functions and responsibilities being cast on the citizens who shall be elected good and true members of the House. That is what the increase of State functions means, if you are to have State functions relegated to irresponsible Commissioners, such as our Railway Commissioners.

(b.) At the rate of 80 words per minute. Takes 10 minutes.

It only needs to select a few typical cases from the many that present themselves to show how heartrending is the misery of many of these people. Here, for instance, is the plight of a widow who lives in Edward Street. She occupies a damp cottage, for which she has to pay 5s. a week, and on entering the front room one sees at a glance that nearly every piece of pawnable furniture has been disposed of. She has four children, and her sole income is the wages of her eldest girl, who earns 6s. 6d. a week at a paper-factory, whilst the woman herself occasionally makes a few shillings at charing work.

The case of a woman in Victoria Street is harder still. The other day the very bed on which she and her children had been sleeping was seized and sold by the bailiffs. The whole amount of the debt—rent—did not come to £2, and the few wretched articles of furniture would not have fetched more than a few shillings. A charitable policeman living in the district, hearing of the affair, redeemed the poor creature's bed, and she has been supplied with partial relief since.

In a house off one of the lanes running from Victoria Street there are three families who cannot boast enough furniture amongst them all to fit out one room. The husbands tramp the city each day in hopes of work, which will not turn up, and the women and children are enabled to just keep body and soul together by presents of food from their neighbours, a shade less straitened than themselves. The charity of the very poor to the very poor is found through all these inquiries to be active and generous—that is to say, within the very circumscribed limits of possibility.

In some of the streets off the Sydney Road there seem to be whole terraces which the direst kind of want has claimed for its own. Some of these houses are comfortable, and evidently in better times were the homes of prosperous working people; and even now it is not safe to judge by externals only, for many of the occupants, in their proper pride, are at pains to keep their sufferings secret. At one house neat curtains are drawn across the windows of the front room, though one is assured that the rooms inside are as bare of furniture as an unoccupied house. You may knock and ring as long as you like at this house but will get no response. If your mission is a charitable one the occupants do not care to see you; if, as is more likely, you are a creditor, you are still more unwelcome. There are many cases like this, where people enduring the bitterest privations would rather die than ask or receive assistance. These, of course, are the most difficult to assist, for they must live, but they will not beg or steal. Work is the only thing that can possibly bring a ray of lightness into their very dark days.

The woman says, when at length by a species of stratagem you enter her cheerless room, "I have had three houses sold over my head, but I am doing pretty well now, as I am making 7s. a week at charing. There are lots worse off than me"; and she directs you to one of them. This proves to be a wretchedly thin young woman, who lives in a bare cottage higher

up the street. Her thinness strikes you unpleasantly at first sight, for it is evident that it is the result of hunger. Her bones show sharply out from her bare arms, and in the pinched features of the face is a look there is no mistaking. Her husband is away up country, looking for work, but meanwhile her experiences have been of the most pitiable kind. She has a baby and a little girl, yet she would not go to the soup-kitchen nor to the large-hearted butcher on the Sydney Road for assistance until the last gasp. She has been forced to, though, for, as she says, "a mother can't see her children starve before her very eyes."

As one goes from house to house in this distressed neighbourhood, the monotony of the stories of suffering becomes painful in the extreme. There is scarcely any variation. The husband or the brother or the mother has been without work for weeks or months: the furniture has been sold, or the bailiffs have taken it; there is absolutely no immediate prospect of a release. In very many instances it is only during the last few weeks that the most crucial pressure has been brought to bear on some families. In good times they had |

(c.) At the rate of 100 words per minute. Takes 5 minutes.

Oh! that the cry of the Church could reach beyond its walls, and awaken a response from many a heart outside! The times in which we live are not worse than they were in "the good old days," but it is only when we come to examine closely in the light of history that we fully realise this. People were no better, perhaps were no stronger, in the old days than are those of to-day; but, lost in the mists of the past, they assume a beauty that did not belong to them.

And yet, as I think of this | City of the Plains, of what it was, of their hopes and plans who founded it, and then of what it is, well we cannot be surprised at a certain reaction, or that other influences have come into being. We cannot but see that there are evils in our midst to-day, evils that we have to recognise; for this is a City of the Plains in more senses than one. It seems as if we were dwelling in a cold, dull, unhealthy atmosphere; there is immoral life all around us; there is poison in our midst politically. Election times are | close upon us, the air is full of it; candidates, I know not how many, are offering themselves—good, bad, and indifferent. And what are politics? Are politics party strife, the abuse of opponents? or are they the pursuit of the best interests of the whole nation? Who are the men most fit to represent us in Parliament? Are they the place-seekers, the men of no opinions, ready to believe what they are told, ready to support that which will pay, ready to be anything you please to make them or call upon them to be? Or are they | the sound-headed, sound-hearted men of no party, who will put first and foremost the welfare of the country? I grant such men are rare, are very hard to find, but what are we electors looking for? Are we going to select such men? Is there that honest political instinct among us, bidding such men rise up amongst us, and saying, "I will not ally myself with this or that side, but I will do the right thing, God helping me, so far as I know it." Have we not, in our political life to-day, to cry aloud, "I | will lift up my heart, and take a more enlarged view of our responsibilities upon this question, looking on things from a higher standpoint." "Lift up your hearts!" You are giving control in matters religious. They tell us that Christchurch is honeycombed with unbelief. It may be so, and yet I am not altogether afraid of unbelief. I know that a wave of unbelief is passing over us; but Freethought, as it calls itself, lifts up its head, speaks loudly, and is drawing many after it; and yet I think that our Freethought philosophy in Christchurch is twenty years behind. |

Maori.—For Junior and Senior Civil Service. Time allowed: 3 hours.

1. Translate the following passage into English:—

Ka hoe mai nei, a, ka u ki Whanga-Paraoa, ara ki Aotea nei. Ka tata mai ki uta, kite rawa mai ki te pohutukawa o te taha-tika e ura atu ana, ehara! tau ana te tututupo ki te wai. Katahi tetei o nga rangatira o te waka ra (te "Arawa") ka karanga ake, "E, kua nui ake te kura o tenei kainga i te kura o Hawaiiki, ka panga hoki ahau i aku kura ki te wai": ehara! panga atu ana ana kura ki te wai—ko te ingoa o te tangata ko Tauninihi, nana i panga atu a Tauihakaea. U rawa mai ra ki uta, ehara! kua pa atu nga ringa ki aua pohutukawa, ana, ngahoro noa iho. Katahi ratou ka mahara, he puawai rakau enei mea, ka raruraru nga rangatira o runga i a te Arawa, mo te maumaunga o a ratou kura, i panga atu ra ki te wai. Muri tata iho, ka kitea aua kura a Tauninihi ki te one o Mahiti—na Mahina i kite—rongo rawa ake kua kitea, tae rawa atu ki te tiki, kihai i riro mai; koia tenei pepeha mo te mea kite, e ka kitea te taonga makere, "Kaore e hoatu e au, tatemea ko te paekura kite a Mahina"—a e takoto mai nei ano aua kura kei a te Whanau-a-Apanui, a tae noa mai ki tenei ra. U kau atu ano ki Whanga-Paraoa, ka panga atu he kumara kia tupu i reira, a e tupu tonu mai nei ano i te pari o taua whenua.

2. Translate the following into Maori:—

In the old time Maoris were nearly always at war, and the people of one settlement never knew the moment when they would be attacked by those of another settlement. Hence they could not be fairly safe unless they lived—in the night-time at any rate—in a strongly-fortified place, one that an enemy could not easily get at. Now, the top of a high hill is a natural fort, and very little work will make it very strong indeed. The higher the hill is, in reason, the better.

These hill-forts, or pas, had other good things about them besides being strong and safe: there was always plenty of pure fresh air to be got outside of the dwellings; it was very easy to get rid of filth by just throwing it down the side of the hill; no water could settle in pools on such high ground, and there could be no swamps near.

Of course the Maori then made his plantations on the low grounds as he does now, because such grounds produce the best crops; but he generally used to work on his cultivation by day, and

return to his pa as evening came on. While he lived in this way there was very little chance of his getting fever or any complaint of that kind; he was ill often enough, perhaps, but not from that sort of disease. This kind of life was found to be troublesome, no doubt, but the Maori had to live in that way if he wished to escape death.

Now all this is changed: the Maori is safe by day and by night; he has no longer to protect himself, the law protects him; there is no fear of his being attacked and killed by a hostile tribe, and no reason why he should gather his crop into a stronghold as soon as possible.

3. Put the following into Maori:—

The largest of these sheep was brought from Makara. By whom was Pita's raupo house built? What are you doing to-day? He was taking care of the sheep. If he had seen the dog that worried the sheep he would have killed it. That horse of Hemi's was stolen during the night. If my house had not been burnt you should have been my guests (guests for me). I spoke to a man on the beach to-day. I said to him, "What is your name?" He said, "Hoani." I have been deceived by one of these men; I do not know which. This is the boy who carried your letters and parcels; he is a good boy. What are the names of the men who threshed your wheat? Do you remember when it was that I gave the black horse to John?

4. Put the following into English:—

He aha tau rakau e whakato na? Naku te kuri nei. I whanau au ki te Waimate. Ko te wahi tera i noho ai matou ki te kai. Mutu rawa tana whangai i nga hoiho, kua po. He tamariki rawa a Hoani i te matenga o tona papa. I tawahi o Waikanae te whare i noho ai a Hoani. I ra uta mai ranei a Tame i tona haerenga mai i Whangahui? I haere atu Te Kawana ki tawahi i nga ra timatanga o te raumati nei. Ekore au e tae wawe atu.

5. Give examples of adjectives used adverbially, and of nouns carrying the termination of a passive verb (all examples to be translated). Correct the mistakes in the following sentences: Tenei ahau ko to koutou hoa te mea nei. Tiakina to tatou kainga ko Karori. Kua kainga koutou te puwha. Haere koe ana ki hea apopo.

6. Write, in Maori, giving an account of floods that have occurred in your district; enumerate losses incurred by the Natives, and picture the distress that they are in for want of food, and ask for assistance in procuring seed for the coming season. Translate your statement into English.

Trigonometry.—For Senior Civil Service. Time allowed: 3 hours.

1. Define the sine, cosine, and tangent of an angle. Prove that—

$$(1.) \tan A \cdot \cos A = \sin A;$$

$$(2.) \sin^2 A + \cos^2 A = 1.$$

Given $\tan A = \sqrt{3}$, find the values of the other trigonometrical functions.

2. Find the values of the sine, cosine, and tangent of angles of 30° , 45° , 60° , and 75° .

3. If A, B, and $A + B$ be each less than a right angle, prove that—

$$\cos(A + B) = \cos A \cdot \cos B + \sin A \cdot \sin B.$$

4. Prove that—

$$(1.) \sin 3\theta \cdot \sin 5\theta + \sin \theta \cdot \sin 9\theta = \sin 4\theta \cdot \sin 6\theta;$$

$$(2.) \sin A + \sin B + \sin C - \sin(A + B + C) = 4 \sin \frac{B+C}{2} \cdot \sin \frac{C+A}{2} \cdot \sin \frac{A+B}{2}.$$

5. Find the values of θ which satisfy the equations,—

$$(1.) \sin 3\theta = \cos 2\theta;$$

$$(2.) 3 \tan^2 \theta - 4 \sin^2 \theta = 1.$$

In (1) find all the angles which satisfy the equation, and hence find the values of $\sin 18^\circ$ and $\sin 54^\circ$.

6. Prove that in any triangle—

$$(1.) \frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c};$$

$$(2.) \cos A = \frac{b^2 + c^2 - a^2}{2bc}.$$

The sides of a triangle are 1, 2, $\sqrt{7}$: find the greatest angle.

7. Given $B = 45^\circ$, $b = 140.5$ ft., $a = 170.6$ ft., find A and C; having given $\log 1.405 = .1476763$, $\log 1.706 = .2319790$, $\log 2 = .3010300$, $L \sin 59^\circ 9' = 9.9337467$, $L \sin 59^\circ 10' = 9.9338222$.

8. Prove that—

If $s = \frac{1}{2}(a + b + c)$, the area of a triangle can be expressed as $\sqrt{s(s-a)(s-b)(s-c)}$.

Given $a = 5$, $b = 12$, $c = 13$, find the area of the triangle. Find also the greatest angle, and the radius of the circumcircle.

9. AB is a horizontal base, of 100 ft. length, measured along the bank of a river. C is the foot, and D the top, of a church tower on the other side of the river. The angle ABC is 60° , BAC is 75° , and DAC is 15° . Find the distance of the tower from the line AB, and also its height. Calculate both results to inches.

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