1899.

NEW ZEALAND.

EDUCATION:

TEACHERS' AND CIVIL SERVICE EXAMINATIONS.

[In continuation of E.-1A, 1898.]

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, 3rd April, 1899.

I have the honour to report upon the annual examinations of candidates for teachers' certificates, and for admission to, or promotion in, the Civil Service. The examinations were held in January, between the 9th and 17th days of the month, at the thirteen towns which are the seats of Education Boards, and also at Whangarei, Thames, Tauranga, Opotiki, Gisborne, Masterton, Westport, Oamaru, Palmerston South, and Lawrence.

The number of candidates was 1,235, made up as follows : For the Junior Civil Service examination, 468; for the Senior Civil Service examination, 96; for certificate examinations, 646; for drawing (pupil-teachers only), 25.

The expenses of the examinations amounted to £881 16s. 2d., and the fees paid by candidates to £1,000 7s. Printing and clerical work are not included in the account of expenses.

The results of the Senior Civil Service examination were made known on the 16th of February, the results of the Junior Civil Service examination on the 17th, and those of the teachers' examinations on the 23rd of the same month.

Of the 96 Senior Civil Service candidates, one applied to be examined in shorthand only, and passed the examination ; one had already passed the examination, but wished to pass in a seventh subject for the purposes of the Barristers' General Knowledge examination, and was successful ; and 28 came up to complete examinations in which they had already been partially successful. Of the 94 ordinary candidates, 44 passed the examination. (See *Gazette*, 23rd February, 1899.)

The names of 261 of the Junior Civil Service candidates were published, in the order of marks, in the *Gazette* of the 23rd February ; one fulfilled the junior test in shorthand only ; and the remaining 206 failed to reach the minimim required, which is one-third of the possible total.

Of the 25 pupil-teachers who availed themselves of the regulation which allows them to come up for one branch of drawing at a time, 15 satisfied the examiner.

At the teachers' examination, two were candidates for Class C (University status being taken into account), 204 were candidates for the whole examination for Class D, and 126, having been credited with "partial success" for Class D, came up to complete their examination ; 223 were candidates for the whole examination for Class E, and 90 came up to complete the examination for that class ; one candidate, a graduate, voluntarily presented herself for examination in subjects in which it was not necessary for her to pass, and she satisfied the examiners. Among these 646 candidates were 153 candidates who had already passed for Class E, and were seeking promotion to Class D ; and of the remainder —493 in number—86 were teachers in the service of the Boards, 245 were pupil-teachers, and 68 were normal-school students in training ; while 34 were persons who had ceased to be teachers, pupil-teachers, or normal students, and 60 had never sustained any such relation to the public schools.

Of the whole number of 646 candidates, 239 have "passed" (144 for D, and 95 for E), and 188 have achieved "partial success" (80 for D, and 108 for E), while 219 have failed to improve their status. Of the candidates that have achieved "success" or "partial success," 33 had previously failed. As the result of the examination, 188 new certificates will be issued (1 for Class C, 92 for Class D, and 95 for Class E), and 52 certificates of Class E will be raised to Class D.

The following table exhibits some of these statistics, and it will be observed that the normal students are again the most successful class of candidates :—

Status before Examination.	Number of Candidates.	Results of Examination.					
		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	153	52	...	...	35	...	87
Not passed before—							
Teachers ...	86	6	15	1	6	13	41
Pupil-teachers	245	35	53	6	18	71	183
Normal students	68	35	4	5	16	5	65
Retired	34	9*	3	1	1	7	21
Outside candidates	60	7	6	1	4	12	30
Totals	646	144	81	14	80	108	427

* Includes 1 for Class C.

The analysis of the results according to education districts is as follows :—

—	D Passes.	E Passes.	E Passes, with Partial Pass for D.	Partial Pass for D.	Partial Pass for E.
I. Candidates for promotion from E to D—153 :—					
Auckland ..	52	15	..	..	14	..
Taranaki ..	3	2	..	..	..	..
Wanganui	18	3	..	..	4	..
Wellington	14	4	..	..	4	..
Hawke's Bay	2	..	..	..	2	..
Marlborough	2	1	..	..	1	..
Nelson	4	1	..	..	3	..
Grey	4	1	..	..	..	..
Westland ..	4	1	..	..	..	..
North Canterbury ..	18	11	..	..	3	..
South Canterbury ..	8	5	..	..	1	..
Otago	5	2	..	..	..	..
Southland	19	6	..	..	3	..
II. Candidates that have not passed before—493 :—					
(a.) Teachers—86,—					
Auckland ..	17	..	3	..	3	1
Taranaki ..	1	..	..	..	..	..
Wanganui	9	2	2	..	1	2
Wellington	9	..	1	..	1	1
Hawke's Bay	6	..	2	..	..	..
Marlborough	5	..	1	..	..	..
Nelson	12	..	2	1	1	4
Grey	9	..	4	..	..	3
Westland ..	3	..	..	..	..	..
North Canterbury ..	6	3	..	..	..	..
South Canterbury ..	1	..	..	..	..	..
Otago	2	1	..	..	..	..
Southland	6	..	..	..	..	2
(b.) Pupil-teachers—245,—					
Auckland ..	66	11	14	2	4	20
Taranaki ..	6	..	4	..	..	2
Wanganui	34	1	12	..	..	12
Wellington	48	8	7	2	2	10
Hawke's Bay	23	3	6	1	3	6
Marlborough	4	..	2	..	..	2
Nelson	16	3	3	..	..	8
Grey	4	2	..	..	..	..
Westland ..	2	3	..	..	..	2
North Canterbury ..	7	2	..	..	2	3
South Canterbury ..	10	3	3	..	..	1
Otago	6	1	..	..	4	1
Southland	19	1	2	1	3	4
(c.) Normal students—68,—					
North Canterbury ..	30*	15	4	3	4†	4
Otago	38	20	..	2	12	1
(d.) Candidates that have retired from the service—34,—					
Auckland ..	2	..	1	..	..	1
Taranaki ..	1	1	..	..	..	..
Wellington	3	..	..	..	..	1
Hawke's Bay	1	..	..	..	..	1
Marlborough	1	..	..	..	..	..
Nelson	3	..	..	..	..	2

* Including 1 honorary candidate.   † Including 1 who gains also partial pass for Class E.

—	D Passes.	E Passes.	E Passes, with Partial Pass for D.	Partial Pass for D.	Partial Pass for E.
(d.) Candidates that have retired from the service—*continued.*					
North Canterbury 10	1[c]	2	1	1	1
South Canterbury 2	..	..	..	..	1
Otago 9	6	..	..	..	..
Southland 2	1	..	..	..	..
(e.) Candidates that have not been in the service—64,—					
Auckland 16	..	..	1	1	3
Taranaki 2	..	1	..	..	1
Wanganui.. 3	..	..	..	..	2
Wellington 6	2	..	..	1	..
Hawke's Bay 1	..	..	..	..	..
Marlborough 2	..	..	..	..	..
Nelson 4	1	2	..	..	..
Grey 1	..	..	..	..	..
Westland	..	..	..	..	..
North Canterbury 4	1	..	..	..	2
South Canterbury 4	..	..	..	..	2
Otago 9	2	..	..	2	..
Southland.. 8	1	3	..	..	2

In many cases work done at the last matriculation examination of the New Zealand University was taken into account as if it had been done at the teachers' examination to which this report relates.

With this I send the list of passes and of cases of partial success at the teachers' examination, and a set of the examination papers. I have, &c.,

GEORGE HOGBEN.

EXAMINATION LISTS.

I.—PASSED FOR CLASS C.

(University status being taken into account.)

North Canterbury—
McSherry, Henry

PASSED FOR CLASS D.

Auckland—
Bongard, Emily
Bower, Eva
Braithwaite, James Henry
Cullens, Emily
Cunningham, Agnes Jane
Evans, Jessie Violet
Green, Bertram Martin
Harris, Frederic
Hughes, Herbert Bomford
Jones, Thomas Rogers
Judkins, Alfred John Thomas
Kirkbride, Mary Grace
Kitching, Lydia Ethel
Marsden, James Nelson
Moodie, Agatha Gorrie
Murray, Alice Maud
Nolan, Bessie Margaret
Pegler, Lydia
Pilkington, William Andrew
Shepherd, Arthur James
Sheppard, Albert Lewin
Sinclair, Ellen Evangeline
Vellenoweth, Lilian
White, Caroline
Willis, Frances Alice
Woods, Francis David
Taranaki—
Chambers, Walter Lawrence Frederic
Richardson, Isabel Mary
Riley, Laura Florence
Wanganui—
Bartlett, Alice Grace
Bowater, Harold Richard
Carson, Annie Margaret
Chapple, Eleanor Cole
Hare, Lilian May
Smith, Hugh Parker

Wellington—
Bennett, John William
Burns, John Campbell
Campbell, Kathleen
Connell, Frederick William
Cooper, Harriet Ada
Dolan, Bernard Joseph Aloysé
Feltham, Edgar Charles
Holm, Annie Alexander
Joplin, Charles Reesby
Player, Mary Preston
Robinson, Edith Alice
Stanton, Elizabeth Annie
Stevens, Winifrid Laura
Thompson, Annie Lyna
Hawke's Bay—
Clarke, Berkeley Charles Plumb
Stephenson, Louisa Jane
Wilson, William Hendry
Marlborough—
Wilmot, David Henry
Nelson—
Bradley, Ada Priscilla
Enright, Mary Teresa
Fair, Teresa
MacKenzie, Janet Craig McKutcheon
Phair, Henrietta
Grey—
de Berry, Leonard Frederick
Crowley, Johanna
Jamieson, William John
Westland—
Crowley, Honora May
North Canterbury—
Banks, Laura May
Bell, Edith Ada
Bringans, John
Chambers, Thomas Frederick
Colee, Walter Cuthbert
Comer, Edith Rose
Dickinson, Myra Felicia
Dix, Alice Elizabeth
Douglas, Ronald Allan
Finlayson, Janet Alice
Gibbs, Emily
Gillman Herbert Alfred William

North Canterbury—*continued.*
Glanville, Emily Hayward
Hall, Dorothy Elizabeth
Hare, Irene Maud
Hewinson, Emma Witts
Hill, Charlotte Jane
Jupp, George Henry
Lake, Emily Mercy
Leversedge, Edith Maud
McGorman, Sarah Ann
Manifold, Lucy
Newell, Mary
Pavitt, Marie Augusta
Pearson, Robert Steele
Picken, Jessie Mary Davidson
Robson, Harry
Ross, Jeanie
Simpson, Emily May
Watson, John
Wilkinson, Evelyn May
Wills, Mabel Sybilla Margaretta Julia
South Canterbury—
Alexander, Gertrude Mabel
Donn, Jessie Elizabeth
Harris, Thora Charlotte
Kirkcaldy, Mary Jane
McLeod, Janet
Montgomery, Hugh
Thomas, William
Wilson, George
Otago—
Apstein, Emilie Bertha
Barclay, Mary Jane
Cockerill, Ruth Vincent
Collis, Mabel
Elder, Jessie Jane
Farquharson, Janet Helen
Firth, Elizabeth Hannah
Gruar, Alice Laura Winter
Hodges, Flora Jamieson Wilson
Hoffmann, Ada
Irwin, Emma
Johnson, Helen Christina Wilkie
Loan, Marion Sandilands
Lucas, Evelyne May

Otago—*continued.*
McKnight, Susannah Catherine Campbell
Matthewson, Mary Ellen
O'Shea, Eliza Agnes
Reid, Ann Rennie
Renton, William
Renz, Antoinette
Robertson, Marion Matheson
Simson, Mary
Sinclair, Agnes
Spraggon, Lilian Emma
Sullivan, Lily
Taylor, Lillias Oswald
Tempero, Emma Caroline
Tubman, Francis
Turner, George Alexander
Watt, Alice
White, Mary Ann
Wilkinson, Dorothea Josephine
Southland—
Brown, Jessie
Dewar, Janet
Dundas, Jessie Ann
Gray, Joseph Henry
Keith, Ida Eliza
Kilburn, Elsie May
McCallum, Mary
Meek, Robert Percy
Wilkins, Gertrude Mary

PASSED FOR CLASS E.

Auckland—
Birss, William
Braithwaite, Lily Harriett
Broun, Jane
Carnachan, Robert
Cooke, Violet May
Fisher, Nellie Worsley
Gillman, Florence Emma
Green, Florence Margaret
Harper, Georgina Catherine
Jones, Gwladys Rogers
McKay, Donald Alexander
Mainwaring, Emma
Paltridge, Alice Maria
Read, John
Shannon, Catherine
Shroff, Maud Ada
Squire, Donald Stanley Byron
Tobin, Charles Edward O'Hara
Tooman, George
Vellenoweth, Jessie
Wilson, Louisa
Taranaki—
Evans, Dafydd Pugh
Kelly, Laura Ellen Hannah
Lilley, Helen
Pearce, Annie Gertrude
Taylor, Maud Ruby
Wanganui—
Aldridge, Olive Emily
Clayton, John Charles
Fitness, Eva Nellie
Gibbs, George Walter
Lyall, Henry
Matheson, Roderick
Mowbray, Gertrude
Powle, Una Wyatt
Slipper, Thomas Benjamin
Stevenson, Margaret
Swinbourn, William Alexander
Voltz, Mary
Watts, Gertrude Emma
Whalley, George Ethelbert
Wellington—
Bird, Florence Rosina
Braithwaite, Lilian Bessie
Gallagher, Annie
Johnston, Margaret Eleanor
Kean, Balfour
Mackay, Kate Maude
Mills, Hilda
Rose, Florence Ernestine
Sicely, Mabel Henrietta
Sloan, Emily
Hawke's Bay—
Adams, Florence Kate
Evans, Grace Mabel
Grant, Annie Lawson
Gray, Maggie Isabella
McCutcheon, Eccles Alexander
Nicholls, Caroline May

Hawke's Bay—*continued.*
Pickering, Esther Emma
Robertson, Isabella Mary
Siddells, Amy Isabella
Marlborough—
Ladley, Ada Blanche Eunice
McMahon, Ethel Christina
Nicoll, Mabel Grace
Nelson—
Best, Frank Dockery
Boyce, Charles George Morton
Cresswell, Annie Amelia Madeira
Gapper, Bernard Richard
Gilbert, Mabel Clara
Nalder, Rose Mary
Tarrant, Elizabeth Constance
White, Lucy Edith
Grey—
Anderson, Alice Charlotte
Beresford, Mabel
Sweetman, Eliza Jane
Walsh, John
North Canterbury—
Anderson, Rosaline
Blackett, Isabella Mary
Bowcher, Maude Lucy
Boyd, Selina Harrison
Charles, Robert
Hunter, Margaret
Longman, Elizabeth Alice
Morrow, Fannie Ellingham
Steele, Elizabeth
Wallace, Emilie
South Canterbury—
Goodall, Agnes Straughon
Smith, Ellen Catherine
Ziesler, Kaja
Otago—
MacLeod, Margaret
Miller, Janet Archer
Southland—
Adams, Margaret Harriet
Archdall, Hewan Alexander
French, Margaret Cruickshank
Hardie, Margaret
McKenzie, Hughina Josephine
Reid, Margaret

II.—OBTAINED " PARTIAL PASS " FOR CLASS D.

Auckland—
Blakey, Frank Ernest
Boswell, James
Boswell, Violet Fanny
Carnachan, Robert
Crabtree, Mabel
Crawford, Maud Marian
Downard, Henry John Finch
Eastgate, Florence Thorpe
Eastgate, Mildred Mira
Fraser, Anne Beatrice
Gillibrand, Emma
Gubb, Sidney Martin
Hefford, Jane Elizabeth
Hill, John Hugh
Jaffrey, Henry Cecil
Jamieson, Robert Edward
Lyons, Euphemia Margaret
McInness, Donald
Potter, Ethel May
Roberts, John Frederick
Shroff, Maud Ada
Skelton, Marcus Noble
Vellenoweth, Jessie
Walker, Maxwell
Wilson, Charles
Wanganui—
Bates, Frederic Arthur
Bowater, Charles Henry Thomas
Matheson, Peter
O'Reilly, John Joseph
Wilson, Albert
Wellington—
Blair, Mary Alice
Clemance, Philip Henry
Dallaston, Charles William
Fellingham, Marjory Urquhart
Johnston, Margaret Eleanor
Johnston, Nita
Kean, Balfour
Kennedy, Mary
Walton, Margaret Catherine
Wedde, Albert Augustus

Hawke's Bay—
Grant, Milton Reid
McCarthy, Ellen
Neal, Alice Eliza Akehurst
Nicholls, Caroline May
Parkinson, Minnie Margaret
Webber, Jane
Marlborough—
Stratford, Herbert Addison
Nelson—
Best, Frank Dockery
Croucher, Minnie Jane
Hanron, Clara
McLean, Catherine Mary
White, Alfred Thomas
North Canterbury—
Andrews, Samuel Hastings
Bell, Henry
Blackett, Isabella Mary
Charles, Robert
Cradock, Sheldon Hugh
Frame, Christina
Hunter, Margaret
McIlraith, Barbara Harriet
Martin, Mary Jane
Nixon, Caroline
O'Brien, Maud Nora Jessie
O'Neill, Maud
Ormandy, Guy Nathan
Steele, Elizabeth
South Canterbury—
Strachan, Barbara
Otago—
Begg, Thomas
Bremer, Agnes
Cameron, Sarah
Clulee, Grace
Cottrell, Arthur John
Davidson, Mary Annie
Duggan, Patrick Joseph
Enright, Mary Agnes
Greig, Ivy Constance
Hartley, Jane Pearson
Hay, Isabella Currie
Howat, Helen Connell
Hunter, Joseph
McGregor, Minnie Louise
MacLeod, Margaret
Miller, Janet Archer
Mitchell, Clarissa Margarita
Morland, James
Nicoll, Henrietta
Pilkington, Jane
Southland—
Archdall, Hewan Alexander
Cameron, Jessie
Clark, Alexander
Dickie, Agnes
Macandrew, Elizabeth Ann Legge Fordyce
Mitchell, Roberta Christina Flaus
Sproat, William Albert

OBTAINED " PARTIAL PASS " FOR CLASS E.

Auckland—
Archibald, Margaret Reid
Broun, James Scotter
Cardno, Elizabeth
Cross, Charles Francis
Dinneen, Charlotte Kate Dalton
Doull, John Stuart
Green, Maud Letitia
Holder, Gertrude Blanche
Hutchinson, Hannah Margaret
Hutton, Robert Guthrie
Jackson, Albert Edward
Jacobsen, Ethel Grace
Kendon, Eleanor Grace
Kingsford, Ellen
McAndrew, Ethel Annie
McRae, Edith Alice
Maria, Joseph Albert
Piggot, Ellen Mary
Richards, Norah
Robinson, Florence Katherine
Short, Emma Mildred
Skelton, Alfred Hall
Snell, Edgar Frank
Stewart, Sarah Lilian
You, Elizabeth Charlotte

Taranaki—
Bicheno, Leonard
Geldart, Frances Harriet
Liddle, Agnes
Wanganui—
Anderson, Eleanor Mary
Baker, Sybil Evelina
Bourke, Mary
Christie, Elizabeth
Cleary, Maud
Foster, Robert Francis
Gatton, Clara Maude Mary
Gordon, Jane Young
Innes, Edith
Liggins, Charles William
Mossman, Leila Lucy
Oakley, Helen Agnes
Relling, Thorsten Frederick
Richardson, Amy Grace
Robson, John Templeton
Wallace, Esther
Wellington—
Clark, William Henry
Cook, Ada Monica
Cross, Margaret Josephine
Fellingham, Rebecca
Goldsmith, Annie Katharine
Higgins, Vivian
McKinnon, Charles James
Mousley, Annie Enid
Prendeville, Phœbe Margaret
Smith, Margaret
Telford, Agnes Cecilia
Willis, Alice Mary
Hawke's Bay—
Foster, Charles Henry Barton
Head, Clace Elizabeth
Lindsay, Elizabeth Earl
Mayo, Ernest
Murray, Elizabeth Hamilton
Rudman, Catherine Emma Brewer
Sargisson, Elizabeth Louise
Marlborough—
Farmar, Clara Swinbourn
Harris, Annie Maude
Nelson—
Cresswell, Olive Elizabeth Oceana
Curtayne, Catherine
Horner, Francesca Mary
Humphrey, Ernest James
Hunter, Margaret Bryce
Ladley, Hilda Florence
McLean, Eva Emily
McLean, Mabel
Marris, Amelia
Molloy, Jane Rune
Oxley, Jessie
Scott, Thomas Chapman Campbell
Stephen, Mary Winifred
Wright, Julia Catherine
Grey—
Erickson, Jeanette Karoline
McDonald, Mildred Louisa
McLauchlan, Annie
Westland—
Jamieson, Amy Frances
Rudkin, George Francis
North Canterbury—
Bourke, Augusta
Curtis, Nellie May
Hayden, Mary
Hewitt, Emma Elizabeth
Just, Maude Aurelie Miriam
MacRae, Helen Rebecca
Maginness, George
Maxwell, Jane Elizabeth
Morton, Sarah
O'Brien, Maud Nora Jessie
Ormandy, Guy Nathan
Wardle, Charlotte Elizabeth
South Canterbury—
Macintosh, Janet Morton
Meredith, Samuel Earnest
O'Callaghan, Leslie George
Shephard, Letitia
Otago—
Beckingsale, Lucy
Hartley, Jane Pearson
Pope, Josephine Mary Jessie
Southland—
Acheson, Catherine Edith Ann
Anderson, Eliza Gellatly
Eggleton, William Coster
Hannan, Cecilia

Southland—*continued.*
Powis, Mary
Purvis, Patience Isabella
Southberg, Eleanor
Taylor, Matilda

III.—Prizes.

Experimental Science—
Jamieson, William John, Greymouth, first prize
Clarke, Berkeley Charles Plumb, Hawke's Bay, second prize
Richardson, Isabel Mary, Taranaki, third prize
Drawing—
Lawson, Emily Bertha, Wellington, first prize
Scott, Thomas Chapman Campbell, Nelson, second prize
Kendon, Eleanor Grace, Auckland, third prize

IV.—Special Mention.

Class D.

English—
Clarke, Berkeley Charles Plumb, Hawke's Bay
Robinson, Edith Alice, Wellington
Wilkins, Gertrude Mary, Southland
Arithmetic—
Bartlett, Alice Grace, Wanganui
Bates, Frederic Arthur, Wanganui
de Berry, Leonard Frederick, Grey
Clarke, Berkeley Charles Plumb, Hawke's Bay
Curtis, Nellie May, North Canterbury
Downard, Henry John Finch, Auckland
Grant, Milton Reid, Hawke's Bay
McGorman, Sarah Ann, North Canterbury
MacKenzie, Janet Craig McKutcheon, Nelson
McLean, Eva Emily, Nelson
O'Brien, Maud Nora Jessie, North Canterbury
Robinson, Edith Alice, Wellington
Simpson, Emily May, North Canterbury
Wedde, Albert Augustus, Wellington
Geography—
Bartlett, Alice Grace, Wanganui
de Berry, Leonard Frederick, Grey
Hill, John Hugh, Auckland
Judkins, Alfred John Thomas, Auckland
Robinson, Edith Alice, Wellington
Simpson, Emily May, North Canterbury
Sinclair, Ellen Evangeline, Auckland
History—
Bartlett, Alice Grace, Wanganui
Enright, Mary Teresa, Nelson
Grant, Milton Reid, Hawke's Bay
Jaffrey, Henry Cecil, Auckland
Kirkcaldy, Mary Jane, South Canterbury
Walker, Maxwell, Auckland
Elementary Experimental Science—
Clarke, Berkeley Charles Plumb, Hawke's Bay
Collis, Mabel, Otago
Enright, Mary Teresa, Nelson
Firth, Elizabeth Hannah, Otago
Hoffmann, Ada, Otago
Jamieson, William John, Grey
Judkins, Alfred John Thomas, Auckland
Richardson, Isabel Mary, Taranaki
Wedde, Albert Augustus, Wellington
French—
Fyers, Christiana, Hawke's Bay
Wilson, Albert, Wanganui
Miller, Janet Archer, Otago
Algebra—
de Berry, Leonard Frederick, Grey
Boswell, Violet Fanny, Auckland
McGorman, Sarah Ann, North Canterbury
Martin, Mary Jane, North Canterbury
Simpson, Emily May, North Canterbury
Wedde, Albert Augustus, Wellington.

Euclid—
de Berry, Leonard Frederick, Grey
Clarke, Berkeley Charles Plumb, Hawke's Bay
Hughes, Herbert Bomford, Auckland
Jamieson, William John, Grey
Vellenoweth, Jessie, Auckland

Class E.

English—
Charles, Robert, North Canterbury
Goodall, Agnes Straughon, South Canterbury
Ladley, Hilda Florence, Nelson
Lilley, Helen, Taranaki
Swinbourn, William Alexander, Wanganui
Taylor, Maud Ruby, Taranaki
White, Mary Ann, Otago
Ziesler, Kaja, South Canterbury
Arithmetic—
Charles, Robert, North Canterbury
Farmar, Clara Swinbourn, Marlborough
Gibbs, George Walter, Wanganui
Gillman, Herbert Alfred William, North Canterbury
Harris, Annie Maude, Marlborough
Maginness, George, North Canterbury
O'Neill, Maud, North Canterbury
Ormandy, Guy Nathan, North Canterbury
Picken, Jessie Mary Davidson, North Canterbury
Steele, Elizabeth, North Canterbury
Geography—
Birss, William, Auckland
Charles, Robert, North Canterbury
Gillman, Herbert Alfred William, North Canterbury
O'Callaghan, Leslie George, South Canterbury
Picken, Jessie Mary Davidson, North Canterbury
Taylor, Maud Ruby, Taranaki
History—
Anderson, Eleanor Mary, Wanganui
Evans, Grace Mabel, Hawke's Bay
Gilbert, Mabel Clara, Nelson
Gillman, Herbert Alfred William, North Canterbury
Hayden, Mary, North Canterbury
MacRae, Helen Rebecca, North Canterbury
O'Callaghan, Leslie George, South Canterbury
O'Neill, Maud, North Canterbury
Ormandy, Guy Nathan, North Canterbury
Picken, Jessie Mary Davidson, North Canterbury
Powis, Mary, Southland
Stephen, Mary Winifred, Nelson.
Taylor, Maud Ruby, Taranaki
Elementary Science—
Humphrey, Ernest James, Nelson
Rudkin, George Francis, Westland
Swinbourn, William Alexander, Wanganui
Agriculture—
Boyce, Charles George Morton, Nelson
Gilbert, Mabel Clara, Nelson
Domestic economy—
Evans, Grace Mabel, Hawke's Bay
Kelly, Laura Ellen Hannah, Taranaki
Ladley, Hilda Florence, Nelson
Lilley, Helen, Taranaki
Macintosh, Janet Morton, South Canterbury
Marris, Amelia, Nelson
Rudman, Catherine Emma Brewer, Hawke's Bay

Classes D and E.

School-management—
Fenwick, Linda Constance, Otago
Price, Violet Jackson, Marlborough
Slipper, Thomas Benjamin, Wanganui
Sullivan, Lily, Otago

Drawing—
Birss, William, Auckland, model
Boswell, Violet Fanny, Auckland, freehand
Bradley, Ada Priscilla, Nelson, model
Clarke, Berkeley Charles Plumb, Hawke's Bay, freehand and model
Cooper, Charlotte Maude, Hawke's Bay, perspective
Dickie, Agnes, Southland, geometrical
Evans, Grace Mabel, Hawke's Bay, model
Goodall, Agnes Straughon, South Canterbury, freehand
Horner, Francesca Mary, Nelson, freehand
Hughes, Herbert Bomford, Auckland, freehand

Drawing—*continued.*
Hutton, Robert Guthrie, Auckland, freehand
Jackson, Albert Edward, Auckland, geometrical
Kendon, Eleanor Grace, Auckland, freehand and model
Kennedy, Mary, Wellington, geometrical
Lawlor, Mary Kate, South Canterbury, freehand
Lawson, Emily Bertha, Wellington, geometrical and perspective
Lilley, Helen, Taranaki, geometrical
Marris, Amelia, Nelson, model
Mayo, Ernest, Hawke's Bay, freehand
Price, Violet Jackson, Marlborough, geometrical

Drawing—*continued.*
Rudman, Catherine Emma Brewer, Hawke's Bay, freehand
Scott, Thomas Chapman Campbell, Nelson, freehand, model, and geometrical
Small, Marianne Annie Taylor, Wanganui, freehand
Swinbourn, William Alexander, Wanganui, geometrical
Tester, Caroline G., Hawke's Bay, freehand
Walker, Maxwell, Auckland, freehand
Willis, Alice Mary, Wellington, model
Wilson, Frank, Hawke's Bay, freehand and geometrical

EXAMINATION PAPERS.

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

[All the sections should be attempted, but not more than one question may be taken in any one section. Sections I., II., and III. are specially important.]

I. Time-tables.

Draw up one of the following time-tables, showing clearly the work of each teacher :—

(a.) For the junior department of a mixed school : Standards I., II., and III., worked in a separate room, without class-room. Staff—Certificated assistant and a P.T., third year.

(b.) For an upper division of a girls' school : Standards IV., V., and VI., with an X class ; main room, with one class-room. Staff—Mistress and two P.T.s, first and second years.

    N.B.—The importance of allowing P.T.s opportunities of observation should be borne in mind.

(c.) For an infant school of 80 pupils—main room and one class-room : Classes P_1, P_2, P_3, and a small S. I. Staff—Mistress and one P.T., first year, with the assistance of a third-year P.T. for the last hour in the morning.

II. Notes of Lessons.

Draw up full teaching-notes of a lesson on one of the under-mentioned subjects, showing in detail what is to be elicited, and how ; what told ; what explained, or illustrated, and in what way ; also stating class for which lesson is designed ; time allowed for it ; and apparatus required :—

(a.) A New Zealand river, mountain, or mountain-range.
(b.) Bread-making.
(c.) A cocoanut.
(d.) Some notable instance of "rising from the ranks" (in the general, and not the special military sense of the term).
(e.) Historical associations of the names borne by natural features of the coast-line of the North Island.
(f.) A visit to a dairy or a cheese factory.

III. Registers.

A new school is opened four weeks before the end of the quarter. Fill in the accompanying section of the quarterly return from the following data :—

			1st Week.	2nd Week.	3rd Week.	4th Week.
(a.) Weekly roll-numbers ...	Boys	...	15	16	17	16
	Girls	...	12	14	14	13
(b.) Weekly attendances ...	Boys	...	142	130	129	148
	Girls	...	114	116	106	122

(c.) There was one whole holiday.
(d.) On one very wet day in the second week the attendance was — morning, boys 9, girls 6 ; afternoon, boys 8, girls 6.
(e.) The highest attendance was in the third week, when one girl was the only absentee.
(f.) The only withdrawals were in the fourth week, in which week also one girl was admitted.

Return of Attendance for Quarter ending .

—	Half-days.	Boys.	Girls.	Total.
I. How many scholars were returned as belonging to the school at the end of last quarter ? ...				
II. How many of these have left, not having attended at all this quarter ?				
III. What, then, was the number really belonging to the school at the beginning of the quarter ? ...				
IV. How many have been admitted during the quarter ?...				
V. How many, therefore, have belonged to the school this quarter ? [Add III. and IV.]				
VI. How many of these [in V.] left before the end of the quarter ?				
VII. What, then, is the number now belonging ? ... [Subtract VI. from V.]				
VIII. What is the average weekly number on the roll during the quarter ?				
IX. How many half-days has the school been opened this quarter ?				
X. What is the number of half-day attendances ? ...				
XI. What, then, is the strict average attendance ? ... [Divide X. by IX.]				
XII. What has been the largest attendance on any half-day this quarter ?				
What is the working-average attendance this quarter?...				

IV.

1. Specify the advantages which the advocates of vertical writing claim for their system. What faults have to be guarded against in teaching the system, and how would you deal with them?

2. How would you conduct a reading-lesson with a Fourth Standard class, so as to make it as helpful as possible to pupils whose reading is marred by (a) extreme nervousness, (b) monotony, (c) indistinctness.

3. What plan would you follow in giving a first lesson on " Proportion " (in arithmetic).

V.

1. Outline an essay on Stow's dictum that the playground is the uncovered school.

2. In criticizing an object-lesson given to an infant class, to what points would you give special attention?

3. What special difficulties are there in the way of getting and keeping the attention of an infant class? How would you endeavour to overcome them?

VI.

1. " Discipline is the process of forming disciples." Discuss this.

2. Suggest ways in which a good "family tone " may be cultivated in a large school. What are the advantages of it? What are the dangers to be avoided?

3. A young teacher is starting work with a class in a separate room, where she can have very little direct supervision from the head teacher. What leading principles would you give her for guidance—(a) in obviating the necessity for punishment, (b) in punishing when it cannot be avoided.

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

1. Describe experiments to show that the velocity acquired in any time by a body free to move under the action of a force depends, first, upon the magnitude of the force acting upon it, and, secondly, upon the length of time during which the force continues to act upon it.

2. Describe experiments to show the pressure of the air.

Describe any kind of air-pump, and illustrate your description with a diagram,

3. In what different ways can it be shown that the pitch of a musical note depends on the frequency of the vibrations which produce it?

How would you determine what number of vibrations in a second is required to produce a given note?

4. How would you show the conversion of electrical energy into heat, and of heat (a) into electricity, and (b) into mechanical motion?

5. How would you show the solar spectrum to a class?

How would you show that white light results from the combination of several different colours? ·

6. How would you show experimentally the attraction and repulsion of electrified and of magnetized bodies?

How would you make a dipping-needle?

7. Give directions for charging and for discharging a Leyden jar; for making an electro-magnet; and for proving a current from a battery.

8. Describe some experiments illustrative of chemical affinity, and of the displacement of one element in a chemical compound by another.

9. Describe some experiments illustrative of electro-chemical action.

What is the result of passing an electric current through water and sulphate of copper?

10. Give directions for making nitric, sulphuric, and hydrochloric acids, and describe an experiment you would make with each.

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

1. Explain what it is that makes a rocket go up. What do you know of the relation of the time taken by a rocket in ascending to the time taken by the stick in descending?

Why does a snowball gain speed in rolling down a hill?

2. Upon what does musical pitch depend?

Explain the action of a phonograph.

3. Describe a magic lantern.

Draw a diagram showing how an image is formed by means of a convex lens.

4. Describe various instruments for measuring temperature.

How is a thermometer graduated?

5. What is a magnet?

Draw a sketch of the arrangement assumed by iron filings when dusted on a card covering a horseshoe magnet.

6. Describe some simple experiments to show electrical attraction and repulsion.

State the chief differences between electricity and magnetism.

7. How would you make an electro-magnet?

How would you exemplify the action of electro-magnetic force?

8. Give directions for preparing oxygen and for preparing hydrogen.

Describe simple experiments that can be made with these gases.

9. Draw a diagram of the digestive system.

Describe the action of its several parts, distinguishing particularly between the respective functions of the stomach and of the intestines

10. What are the chief differences between plants and animals?

Explain the action of a " balanced " aquarium.

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

1. How far do you think bodily health is dependent on the state of the mind? What mental and emotional influences would you deem most conducive to good health?

2. What dress do you consider suitable to tennis, cycling, and gymnastics? Are there any present customs in dress that you think undesirable? If so, explain why you think them so.

3. Discuss the effect of trees about a house, contrasting deciduous and evergreen trees. How can such evergreen trees as pines and blue-gums be used so as to let sunlight fall on a house in winter and to shade it in summer?

4. Describe and explain all the ways you know of giving "lightness" to pastry, cakes, and bread. Why is oatmeal not used for bread? Compare oatmeal and flour as food.

5. How would you ventilate a schoolroom and a living-room respectively? Describe experiments to illustrate ventilation.

6. Give the general principles involved in grilling, frying, baking, and boiling. How should each of these things be done to insure the best results?

7. Give reasons for the necessity for cleanliness—(a) in person, (b) in the house, (c) in cooking, (d) in the sick-room.

8. Describe the nervous system, and make a sketch illustrating the structure of the eye.

9. Describe the kind of exercise you think most suitable to a teacher—(a) in robust health, (b) in delicate health.

10. Discuss the disadvantages of open and of closed drains, and show, by a diagram, how to connect a house with a drain.

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

[Illustrate your answers with diagrams where possible.]

1. Describe the inflorescence and the flower of any cereal (or grass).   Show how fertilisation is effected, and how the seed is formed.

2. Give an account of the chemical composition of plants.   Describe fully the experiments which you would employ in illustration of a lesson on this subject.

3. How do plants obtain the carbon required for their growth?   Explain how you would carry out, on a satisfactory scale, an experiment illustrating this subject.   Mention the conditions necessary to insure success, and show how you could prove the presence of compounds of carbon formed during the experiment.   Draw a sketch of the apparatus you would employ.

4. What is humus, how is it formed, and what is its value in the soil?   How would you demonstrate the presence of humus in a soil?

5. What do you understand by the term " exhaustion of the soil," and how far is the term correct?   To what causes may the exhaustion be due, and in what ways may it be remedied?

6. Give an account of the movements of water in the soil.   What are the effects of draining the soil?

7. Explain fully the advantages to be secured by a rotation of crops.   Give an example of such a rotation, and comment upon it.

8. What are the chief kinds of nitrogenous manures?   State the composition and the sources of the principal artificial manures containing nitrogen.

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

[Illustrate your answers with diagrams where possible.]

1. Describe the structure of the foliage leaf of the bean or of any other plant.   What is the use of the foliage leaves?   Describe experiments that illustrate your answer.

2. Describe the structure of a seed, and the changes that take place during germination.

3. State what you know of the composition of water.   For what purposes does a plant require water?

4. What is the character of the food that plants obtain from the soil?   How is the food absorbed?

5. Write an account of the nature and mode of origin of soils.   Explain how it is that soils differ so much from one another.   What qualities are essential to a good soil?

6. What changes take place in a soil when it is freely exposed to the action of the air?

7. Why is it necessary to use manures?   State what you understand by general and what by special manures, and give examples.

8. What is the composition of limestone, quick-lime, and slaked lime?   What is the value of lime in agriculture?

9. Write an account of the life history of some insect that is injurious to crops, and describe carefully the changes which it goes through.

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

[NOTICE.—All candidates are required to attempt the spelling and the punctuation exercise.]

1. In the following passages some of the words have an obsolete meaning.   In each case substitute the modern word or phrase, and give the present meaning of the old word :—

(a.) In man there is nothing admirable but his weakness and ignorance.

(b.) Bounty and magnificence are virtues truly regal.

(c.) In her relation to the king she was the best pattern of conjugal love and obsequiousness.

(d.) The nobility of France were . . . well-bred, very officious, humane, and hospitable.

(e.) He bears him like a portly gentleman.

(f.) Shepherds lay afield that night
      To keep their silly sheep.

(g.) The wicked are not secure even when they are safe.

(h.) Archbishop Abbot was painful, stout, severe against bad manners, of a grave and voluble eloquence.   .

(i.) Prevent us, O Lord, in all our doings.

(j.) Duns Scotus was the wittiest of the school-divines.

2. State the exact grammatical function and the force of the italicised words and phrases in the following sentences :—

(a.) He is our subject, Mowbray, *so* art thou.

(b.) Jean Paul's works require to be studied as well as read, and *this* with no ordinary patience.

(c.) We must allow *what* I have hinted in a former paper, that his language was too much laboured.

(d.) Laugh, then, at any *but* at fools or foes.

(e.) The soldiers did not know what *it* was *to yield*.

(f.) He had been a pedlar from his youth—at least, *so* he frequently asserted.

(g.) It happened about the time *when* the grapes grow ripe.

(h.) The soldier swore I was either dumb or deaf, if not *both*.

2—E. 1A.

(*i.*) The page read himself *asleep*.

(*j.*) *Speaking so as not to be understood* and *writing so as not to be read* are among the minor immoralities.

3. (*a.*) Rewrite the following passages in simpler language, avoiding, as far as possible, words derived from the Latin :—

(1.) We desire to manifest our gratitude.

(2.) He was executed on account of his participation in the project of insurrection.

(3.) It was impossible for him on that occasion to maintain an erect position.

(4.) Fire always is aspirant, the sole exception being where incandescent masses fall down and so act as a medium of ignition.

(*b.*) In the following sentences the words used are from the Anglo-Saxon. Substitute words derived from the Latin, where these are preferable :—

(1.) You cannot behold a thing in your mind otherwise than in or under some shape of doing or of being.

(2.) It is unhappy that the old ending in *en*, which is yet the main one in West Friesic, should have given way to the hissing *s*.

(3.) The wording is a hindrance to the teaching of the homely poor, or, at least, the landsfolk.

4. Rewrite the following passage from Milton in good modern English, using short sentences, arranged in logical order, and avoiding ambiguities or Latinized constructions :—

" When a city shall be as it were besieged and blocked about, her navigable river infested, inroads and incursions round, defiance and battle oft rumoured to be marching up, even to her walls and suburb trenches ; that then the people, or the greater part, more than at other times, wholly taken up with the study of highest and most important matters to be reformed, should be disputing, reasoning, reading, inventing, discoursing, even to a rarity and admiration, things not before discoursed or written of, argues first a singular good-will, contentedness and confidence in your prudent foresight and safe government, lords and commons ; and from thence derives itself to a gallant bravery and well-grounded contempt of their enemies, as if there were no small number of as great spirits among us, as his was who, when Rome was nigh besieged by Hannibal, being in the city, bought that piece of ground at no cheap rate whereon Hannibal himself encamped his own regiment."

5. Write an essay on either (*a*) the progress of invention in the nineteenth century and its effect on modern life, or (*b*) any heroic character in history.

[NOTE.—Higher marks will be attached to the material and method of treatment of (*a*) than of (*b*).]

6. Punctuate the following passage, and arrange it in paragraphs :—

And now we are drawing to home she continued I knew you would come Harry if it was but to forgive me I was half frantic with grief then when I saw you and I know now they have told me that wretch whose name I can never mention even has said it how you tried to avert the quarrel but it was Gods will that I should be punished and that my dear lord should fall he gave me his blessing on his death bed Esmond said thank God for that legacy amen amen dear Henry said the lady pressing his arm I knew it you had spared me many a bitter night had you told me sooner Mr. Esmond said I know it I know it she answered I confessed to Mr. Atterbury I said I would not write to you . . . but I knew you would come back I own that and to-day Henry in the anthem when they sang it when the Lord turned the captivity of Zion we were like them that dream I thought yes like them that dream that dream.

7. Write down the words dictated by the Supervisor. [Candidates are requested to write the words in a column.]

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

The Supervisor will please read over the following words and then dictate them :—

Accredited, diaphanous, supposititious, trammelled, supererogation, allopathy, pharisaical, vicissitude, pusillanimity, cartilaginous, eleemosynary, umbrageous, psychical, accoutre, tessellated, seigniorage, esoteric, saccharine, superficies, sycophant.

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

[NOTICE TO CANDIDATES.—All candidates are required to attempt the spelling and the punctuation exercise. The answers should be arranged in the order in which the questions are set.]

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

2. Give, discuss, and illustrate rules for the use of " shall " and " will."

3. Explain and illustrate the following statement : " Letters sometimes intrude into words where they are not radical."

4. In each of the following sentences a word is misapplied. Rewrite the sentences, substituting the proper word in each case :—

(1.) The reader will come to know this, whenever he arrives at that state.

(2.) The king of solitude is also the king of society ; the reverse, however, is not so true.

(3.) By such controversies, fairly conducted, truth is often eliminated.

(4.) This was the unanimous deliberation of the court.

(5.) Monarchy stood prostrate at the foot of the Church.

5. The following is a sentence analysed into its component parts. Recombine the parts into a sentence, and supply the proper connectives :—

    A. The chiefs still prepared for a conflict (principal clause).
    B. The conflict promised this dismal end to the spirit (relative clause to " conflict " in A).
    C. Men are accustomed to evince this spirit (relative clause to " spirit " in B).
    D. Men are abounding in strength and full of hope (principal clause to C).
    E. The chiefs knew (concessive clause to A).
    F. A determined resistance to a determined assault must needs result in the slaughter of the garrison (noun clause to E).

6. Give the *general* analysis of the following passage ; and parse *in full* the words in italics :—

> *Stop* and consider ! life is *but* a day ;
> A fragile dewdrop on *its* perilous way
> From a *tree's* summit ; a poor Indian's sleep
> *While* his boat hastens to the monstrous steep
> Of Montmorenci. Why so sad a moan ?
> Life is the rose's hope while *yet* unblown ;
> The *reading* of an *ever changing* tale ;
> The light uplifting of a maiden's veil ;
> A pigeon tumbling in clear *summer* air ;
> A laughing *school-boy*, without grief or care,
> Riding the springy branches of an elm.

7. Write two paragraphs on *one* of the following subjects, attending carefully throughout to expression, punctuation, and neatness of form :—

    (1.) Prospects of China.
    (2.) The English in Egypt.
    (3.) The pleasures of reading.

8. Punctuate the following passages, and put capitals where they are required :—

    (1.) in the worst volume of elder date the historian may find something to assist or direct his enquiries the antiquarian something to elucidate what requires illustration the philologist something to insert in the margin of his dictionary

    (2.) within that charmed rock so torridge boatmen tell sleeps now the old norse viking in his leaden coffin with all his fairy treasure and his crown of gold and as the boy looks at the spot he fancies and almost hopes that the day may come when he shall have to do his duty against the invader as boldly as the men of devon did then and past him far below upon the soft south eastern breeze the stately ships go sliding out to sea

[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.]

9. 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. No marks will be given for any word that contains a doubtful letter.]

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

[The Supervisor will please be so good as to draw the attention of candidates to the directions in regard to questions 8 and 9.]

Accommodation, justifiable, ecclesiastic, lineage, quinsy, receipt, fictitious, puerile, riveting, niece, hygiene, fidgety, tangible, veracious, irrefragable, obsolete, resemblance, homogeneous, incendiary, obsequious.

English (Paper I., Composition and Précis).—*For Senior Civil Service. Time allowed : 3 hours.*

1. Point out and correct any mistake in the words or grammar of the following sentences :—

    (a.) The labourers are able in the hottest weather to carry on their avocations without danger.
    (b.) The stuff was well calculated to burn, though it was not there for such a purpose.
    (c.) The equanimity of spirit which Pope aspired to possess was perhaps injurious to him as a poet.
    (d.) Language is not a work of human art in the same sense in which painting or building or writing or printing are.
    (e.) The army was as ready, perhaps readier, for a winter campaign than for a summer.
    (f.) He would have liked to have shown off Sheilah to some of his friends.
    (g.) I shall have great pleasure in accepting your kind invitation.
    (h.) Shelley, like Byron, knew early what it was to love ; almost all the great poets have.
    (i.) Between every stitch she could look up and see what was going on in the street.
    (j.) Information is given by the returning officer to a candidate of his nomination.

2. Compare the following descriptions of a battlefield, having especial regard to their literary and imaginative merits :—

(1.) Now entertain conjecture of a time
When creeping murmur and the poring dark
Fills the wide vessel of the universe.
From camp to camp, through the foul womb of night,
The hum of either army stilly sounds,
That the fixed sentinels almost receive
The secret whispers of each other's watch;
Fire answers fire, and through their paly flames
Each battle sees the other's umbered face;
Steed threatens steed in high and boastful neighs
Piercing the night's dull ear; and from the tents
The armourers, accomplishing the knights,
With busy hammers closing rivets up,
Give dreadful note of preparation.
* * * * * *
Proud of their numbers, and secure in soul,
The confident and over-lusty French
Do the low-rated English play at dice,
And chide the cripple tardy-gaited night,
Who, like a foul and ugly witch, doth limp
So tediously away. The poor condemned English,
Like sacrifices, by their watchful fires
Sit patiently, and inly ruminate
The morning's danger; and their gesture sad,
Investing lank-lean cheeks and war-worn coats,
Presenteth them unto the gazing moon
So many horrid ghosts.
—*Henry V.*, Act IV., Prologue.

(2.) " Nor ever yet had Arthur fought a fight
Like this last dim, weird battle of the west.
A death-white mist slept over sand and sea.
* * * * * *
And friend slew friend, not knowing whom he slew;
And some had visions out of golden youth,
And some beheld the faces of old ghosts
Look in upon the battle; and in the mist
Was many a noble deed, many a base,
* * * * * *
And ever and anon, with host to host,
Shocks, and the splintering spear, the hard mail hewn,
Shield-breakings, and the clash of brands, the crash
Of battleaxes on shattered helms, and shrieks
After the Christ, of those who falling down
Looked up for heaven, and only saw the mist;
And shouts of heathen and the traitor knights,
Oaths, insult, filth, and monstrous blasphemies,
Sweat, writhings, anguish, labouring of the lungs,
In that close mist, and cryings for the light,
Moans of the dying, and voices of the dead."
—*Tennyson ("Passing of Arthur").*

3. Write an essay on the life of Charles Lamb as he describes it in the "Essays of Elia."

4. Make an abstract of the following correspondence.

[An abstract serves as an index, and should give the date of each letter, the name of the writer and of the person addressed, and, in as few words as possible, the subject-matter of each letter.]

5. Draw up a *précis* of the same correspondence.

[A *précis* is a brief and clear statement of what passed, not letter by letter, but in the form of a narrative. It should include everything material, and be expressed very clearly, and as briefly as is compatible with completeness and distinctness.]

No. 1.

The Local Manager, New Zealand Shipping Company, Wellington, to the Secretary, General Post Office, Wellington.

The New Zealand Shipping Company (Limited),
Wellington, 14th January, 1898.

SIR,—

I beg to inform you that the general manager of this Company has received cable advice from the London manager that a petition has been presented to the Court for an order to wind up the Canadian-Australian Steamship Company, and that, therefore, the New Zealand Shipping Company will continue the service without interruption, in conjunction with the mortgagee.

I am instructed to ask for your cordial co-operation in the meantime, and to request that no subsidies under the mail contract shall be paid until new arrangements are completed.

I am, &c.,
HENRY ROSE, Local Manager.

W. Gray, Esq., Secretary, General Post Office, Wellington.

No. 2.

The Secretary, General Post Office, Wellington, to the Local Manager, New Zealand Shipping Company, Wellington.

SIR,—   General Post Office, Wellington, 18th January, 1898.

I have the honour to acknowledge receipt of your letter of the 14th instant, stating that your Company had received advice from London to the effect that a petition had been presented to the Court for an order to wind up the Canadian-Australian Steamship Company, and that, in the event of this being decided upon, the New Zealand Shipping Company would continue the service without interruption, in conjunction with the mortgagee.   I am, &c.,

The Local Manager, New Zealand Shipping Company   W. GRAY, Secretary.
(Limited), Wellington.

No. 3.

The Agent-General to the Hon. the Premier.

(Telegram.)   London, 8th February, 1898.

Vancouver service : Official receiver asks me to inform the New Zealand Government that, order having been made wind up Canadian-Australian Steamship Company, he has been provisionally appointed liquidator, and has appointed the New Zealand Shipping Company sole agents for New Zealand, with power, *inter alia*, receive subsidies from the New Zealand Government.

No. 4.

The General Manager, New Zealand Shipping Company, Christchurch, to the Local Manager, Wellington.

(Telegram.)   Christchurch, 4th March, 1898.

INFORM Mr. Gray London cables arrangements have been made release " Miowera " to sail about 6th instant. Continue booking passengers and cargo. No intention stopping service. Canadian Agent-General arranging pay subsidies liquidator. No cause for anxiety regarding continuation Vancouver service.

No. 5.

The General Manager, New Zealand Shipping Company, Christchurch, to the Local Manager, Wellington.

(Extract.)   Christchurch, 13th March, 1898.

ON 10th instant London cabled us as follows : " Canadian-Australian Company, legal formalities completed. Cowan is confirmed as liquidator. Regular service will be now efficiently maintained. " Aorangi " arrived 5th instant ; she averaged nearly fourteen knots per hour.

No. 6.

The General Manager, New Zealand Shipping Company, Christchurch, to the Secretary, General Post Office, Wellington.

                    The New Zealand Shipping Company (Limited),
                         Christchurch, 10th May, 1898.

SIR,—   *Canadian-Australian Royal Mail Steamship Company.*

We beg to advise you that we are in receipt of advices from Messrs. Burns, Philp, and Co. (Limited), managers of this company in New South Wales, as follows : " We are pleased to inform you that the Government in this colony have now agreed to pay us the subsidies due to the line under the contract made to the line by Mr. James Huddart, and assigned by him to the Canadian-Australian Royal Mail Steamship Company. We understand that the New Zealand Government will act similarly to New South Wales. Should this matter not be already arranged, you might inform them that the Government of this colony is now paying the subsidies to us."

We shall be glad to hear from you that your Government will take up a similar position with regard to this matter as that taken by the New South Wales Government.

                         Yours, &c.,
                    ISAAC GIBBS, General Manager for Colonies.

W. Gray, Esq., Secretary, General Post Office, Wellington.

No. 7.

The Secretary, General Post Office, Wellington, to the General Manager, New Zealand Shipping Company, Christchurch.

SIR,—   General Post Office, Wellington, 21st May, 1898.

I have the honour to enclose for examination rough statements showing the running and earnings of the Vancouver mail steamers from the commencement of the service by the " Miowera," from Wellington for Vancouver on the 11th December last up to the arrival of that vessel from Vancouver at Wellington on the 5th instant.   I am, &c.,

The General Manager, New Zealand Shipping Company   W. GRAY, Secretary.
(Limited), Christchurch.

No. 8.

The Secretary, General Post Office, Wellington, to the General Manager, New Zealand Shipping Company, Christchurch.

SIR,—   General Post Office, Wellington, 23rd May, 1898.

I have the honour to acknowledge the receipt of your letter of the 10th instant, asking that the Department might pay the subsidy in respect of the Vancouver mail service to your company, and, in reply, to inform you that, on the accounts being adjusted, your request will be acceded to.   I have, &c.,

The General Manager, New Zealand Shipping Company   W. GRAY, Secretary.
(Limited), Christchurch.

English (Paper II., Literature).—For Senior Civil Service.   Time allowed : 3 hours.

1. Discuss Lamb's criticism of the comedy of the Restoration.   Apply it to the comedy of the period of Queen Anne, and give a short account of the chief comedies produced between 1702 and 1714, naming the author of each.

2. Explain the following references :—
    (a.) The mysteries of Jamblicus or Plotinus.
    (b.) My household gods do not willingly seek Lavinian shores.
    (c.) Had he asked me of what song the Siren sang, or what name Achilles assumed when he hid himself among women, I might, with Sir T. Browne, have hazarded a "wide solution."
    (d.) Pastoral Domenichino.
    (e.) Belisarius begging for an obolum.
    (f.) The Alsatia of hunted casuistry.
    (g.) The honest steward Flavius.
    (h.) The Lernean pangs are quenched, and Philoctetes is become an ordinary personage.
    (i.) The pen of Yorick could have drawn J. E. entire.
    (j.) At ease in our little Goshen.

3. (a.) Give a brief sketch of the character of Henry V. as drawn by Shakespeare.
    (b.) Write what you know of Fluellen, Nym, the Dauphin.

4. Rewrite the following passage briefly in modern English, avoiding tameness of style :—
>   Thus, with imagined wing our swift scene flies,
>   In motion of no less celerity
>   Than that of thought.   Suppose that you have seen
>   The well-appointed king at Hampton pier
>   Embark his royalty ; and his brave fleet
>   With silken streamers the young Phœbus fanning.
>   Play with your fancies, and in them behold
>   Upon the hempen tackle ship-boys climbing ;
>   Hear the shrill whistle which doth order give
>   To sounds confused ; behold the threaden sails,
>   Borne with the invisible and creeping wind,
>   Draw the huge bottoms through the furrow'd sea,
>   Breasting the lofty surge.   O do but think
>   You stand upon the rivage and behold
>   A city on the inconstant billows dancing.
>   *   *   *   *   *
>   Grapple your minds to sternage of this navy,
>   And leave your England, as dead midnight still,
>   Guarded with grandsires, babies, and old women,
>   Either past or not arrived to pith and puissance.

5. Trace the rise of newspaper and magazine writing in the age of Queen Anne.

6. Name and describe the chief works written by the following writers during this period : Defoe, Dennis, Swift, Pope, Rowe, Berkeley, Gay.

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

1. Simplify $999 \times \{(0\dot{6}5\dot{3})^2 - (0\dot{3}4\dot{6})^2\} \div 0\cdot30730$

2. A certain number of regiments are formed into three brigades so that there are the same number of regiments in each, the regiments in any one brigade being of the same strength.   Find the greatest possible number of regiments and the strength of each, the brigades containing 5622, 6540, and 6858 men respectively.

3. Find, without dividing, the remainders when 17,365,367 is divided by 4, 5, 9, and 100 respectively, showing in each case by what process of reasoning your result is obtained.

4. The rates of exchange being £1 = 25·4 francs, 3·5 francs = 105 kreuzer, 60 kreuzer = 1 florin, and the cost of travelling in Germany being 1½ florins a German mile = 4½ English miles, what is the cost of travelling in Germany 381 English miles ?

5. The flooring of a room 14 ft. 3 in. long by 13 ft. 4 in. wide is laid with ½ in. planks each 8 in. wide and 10 ft. long. How many will be used, and what will be the weight of the whole, if 1 cub. in. of the wood weighs half an ounce?

6. A grocer buys 2 cwt. of tea, and sells the first hundredweight at 5 % profit, and the second, which cost £1 more, at 12 % profit: the difference in the retail price being 4d. a pound, find the cost price of each hundredweight.

7. Find the true present worth of £132 3s. due 2¼ years hence at 4½ % simple interest.

8. In what time would a cistern be filled by three pipes, whose diameters are ½ in., ¾ in., and 1 in., all open at once, if the largest alone would fill it in 40 minutes, the rates of flow being proportional to the squares of the diameters?

9. Two clocks strike together on Friday evening, and on Saturday evening one is ten minutes to eleven when the other strikes eleven: how much must the slower be put on that they may strike nine together on Sunday morning?

10. How much three-per-cent. stock must be sold out at 96¾ to buy an estate producing an income of £377 6s. 6d. at 25 years' purchase?

11. Find the value of 3 tons 11 cwt. 3 qr. 27 lb. at £1 19s. 8d. a hundredweight.

12. A offers for an estate £37,800 cash, and B offers £45,400 to be paid at the end of four years. Which is *now* the better offer, and by how much, allowing 5 % interest?

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

1. Obtain by practice the value of 14 miles 5 furlongs 97 yards 2 feet at £2 15s. a furlong.

2. If 3 hundredweight 3 quarters 21 pounds 12⅘ ounces cost £13 6s. 3d., what is the cost of one hundredweight?

3. Find the G.C.M. of 216000 and 727488; and the L.C.M. of 7, 11, 21, 63, 91, 99, 117, 143.

4. What will it cost to paper a room 24 ft. 8 in. long, 18 ft. 4 in. wide, and 10 ft. 6 in. high, with paper 27 in. wide at 6d. a yard?

5. Simplify $\dfrac{24}{2\frac{1}{3} \text{ of } \frac{11}{14} \text{ of } 3} \div \dfrac{2\frac{2}{3} \text{ of } 1\frac{1}{8}}{4\frac{1}{6} \text{ of } \frac{3}{5}}$

6. Find the value of 0·90563 of £1; and divide 186·4302 by 31·02, 18643·02 by 0·3102, and 0·1864302 by 3·102.

7. What will be the cost of $\dfrac{\frac{2}{3}-0·025}{\frac{11}{40}+2·0625}$ of 1·0̇3̇ of 88 pounds of silver at 2s. 4d. an ounce?

8. A quantity of stuff is bought at nineteen guineas a hundredweight: if 5 per cent. of it is lost by leakage, and the remainder is sold at 4s. 6d. a pound, find the rate of profit per cent.

9. If £3,200 amounts in three years to £3,560 at simple interest, what would be the amount at compound interest in the same time and at the same rate per cent.?

10. The income derived by a legatee from money invested in his behalf in the 2¾-per-cents at 103½ is £85 6s. 8d.: what was the amount of the legacy?

11. The water in a mill lead has a uniform width of 1 ft. 3 in. and a depth of 3½ in.: if it flows at the rate of 1·5 miles an hour, how many gallons will it discharge in 24 hours, estimating a gallon to contain 277·2 cub. in.?

12. A farmer at a sale bought heifers at £3 7s. 6d. a head, twice as many pigs as heifers, at 14s. 6d. a head, and 5 times as many sheep as pigs, at 6s. a head: if he paid £70 8s. 6d. for the whole, how many of each did he buy?

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

1. How can you tell by inspection whether any given number is divisible by 8, and whether it is divisible by 9? Hence show that 176437872 is divisible by 72.

2. Find the value of 968 articles at £199 17s. 9¾d. each.

3. Simplify—

(a.) $\dfrac{2+\frac{1}{5}}{2-\frac{1}{5}} + 3 + \dfrac{1+\frac{1}{5}}{1-\frac{1}{5}} + \dfrac{2-\frac{1}{5}}{2+\frac{1}{5}} - \dfrac{1-\frac{1}{5}}{1+\frac{1}{5}}$

(b.) $1\frac{1}{2}$ of $\dfrac{\frac{1}{2}+\frac{1}{3}+\frac{1}{4}}{2\frac{1}{2}-3\frac{1}{3}+4\frac{1}{4}} \times \dfrac{\frac{2\frac{1}{4}}{3\frac{1}{7}}+\frac{\frac{3}{16}}{1\frac{5}{8}}}{\frac{3}{4\frac{1}{2}}+\frac{4\frac{1}{2}}{3}}$

4. State and prove the rule for turning a mixed circulator into a vulgar fraction; and find the value of—

$$\dfrac{1\frac{1}{2} \text{ of } 19 \text{ of } 0·0342 \times 1·4\dot{4}\dot{2}}{0·75 \times 57·76}$$

5. If the interest payable on a debt of £4,000,000 were reduced from 4 % to 3½ %, what sum would be saved annually? If, in consequence, the price of stock fell from 101 to 95⅝, by how much would the whole property of the fundholders be diminished?

6. In a football match two players, A and B, on opposite sides, are standing 12 yards from each other in a line parallel to the goal line, and a distance of 60 yards from it. A, being opposite the goal, gets the ball, and tries to run straight in; and B, starting at the same time, runs in a straight line so as to catch him 25 yards from the goal line. Compare their respective speeds.

7. An article is sold so as to gain 5 %. If it had been bought for 5 % less, and sold for one shilling less, the gain would have been 10 %. Find the cost price.

8. Find the cube root of 2461·375, and the fourth root of 923521.

9. If the three-pound loaf cost 7d. when wheat is 35s. a quarter, what should be the price of wheat when the two-pound loaf costs 4½d. ?

10. In what time will £419 amount to £486 4s. 3½d. at 4⅝ % simple interest ?

11. A can do twice as much as B : in what time will each of them do separately as much as they can do together in 8 days ?

12. The simple interest on a certain sum of money for 2 years is £71 16s. 7½d., and the·discount on the same sum for the same length of time, and at the same rate per annum, is £63 17s. Find the rate per annum, and the sum.

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

1. Explain the terms—atoll, cañon, fumarole, geyser, landes, mirage, moraine, polder, solfatara, tundra.

2. Give a general account of the circulation of the atmosphere, and state more particularly what you know of the following winds : simoom, monsoon, tornado, trade-winds, harmattan, sirocco, föhn winds, anti-trade winds, etesian winds, land and sea breezes.

3. State what you know of the causes and the phenomena of tides. What functions do tides perform in the economy of nature ?

4. Mention and describe the rainless, or almost rainless, portions of the earth's surface. In each case account for the lack of rain.

5. Draw a sketch-map of the basin of the Nile, inserting as much detail as you can.

6. Explain the term " sphere of influence." Draw a sketch-map of Africa (without unnecessary detail), marking the various possessions and spheres of influence of the different European nations.

7. Give a brief description of China, and indicate as far as you can the nature and extent of the claims now being made upon her by European nations.

8. Give an account of the chief trade routes in the Pacific Ocean.

9. Describe the chief volcanic regions of the world, mentioning the most important volcanoes in each, giving (approximately) their height, and stating whether they are active or extinct.

10. From what countries are the following commodities chiefly derived—wool, cotton, wheat, gold, silk, rice, timber, coal, iron, hides ? Discuss the relative advantages and disadvantages of the various wheat-producing countries in competing for the wheat trade.

11. What do you know of—Dyea, Cavite, Samarkand, Say, Bahr-el-Ghazal, Oberammergau, Perim, Matanzas, Weihaiwei, Kalgoorlie ?

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

1. Compare the climates of England, Spain, and Madeira, on the eastern side of the Atlantic, with the climate of states or places in about the same latitude on the western side.

2. Describe the natural features of the larger islands of the West Indies, and draw a sketch-map of Jamaica, showing its principal towns.

3. Name the principal ranges of the mountain systems of Africa.

4. What are the principal islands and groups of islands of the Malay Archipelago? State the nation to which each island or group belongs.

5. Describe the route of the railway that is being constructed through Asiatic Russia, naming the rivers to be crossed and the terminal point on the Pacific Coast.

6. Which of the European States formerly ruled by the Sultan of Turkey have since passed under the administration of any other Power? Which of them have become quite independent ?

7. Describe the different routes by which the Isthmus of Panama can be approached by a vessel from the Atlantic, noticing the countries or islands passed on the way.

8. Give some account of the Persian Gulf, its characteristics and commercial possibilities.

9. Where are the following situated : Dunkirk, Callao, Mount Haidinger, Labuan, Coolgardie, Port Underwood, Acapulco, Srinagar, Nagasaki, Collingwood ?

10. Give a brief account of one of the larger drainage areas of New Zealand, with reference to its rivers and tributaries, townships, soil, productions, and industries.

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

1. What claims has King Alfred to the title of " the Great " ?

2. What was the Hundred Years' War ? Give a brief account of its main incidents.

3. Discuss briefly England's relations with foreign countries in the reign of Elizabeth.

4. Mention in order Charles the First's various parliaments before 1640, and describe briefly the proceedings of each.

5. Give a brief sketch of the career of Oliver Cromwell, and contrast his foreign policy with that of Charles II.

6. Detail briefly the chief events of the reign of William III., and discuss that sovereign's character as a statesman.

7. Give a short account of the various attempts made by the exiled Stuarts to recover the throne of England.

8. Give an account of the career of William Pitt, Earl of Chatham, and discuss his statesmanship, with especial reference to his foreign policy.

9. Give a short description of the Peninsular War.

10. Trace the history of religious toleration from 1603 to the date of the removal of the Catholic disabilities.

11. Write short notes on—Test Act, Hampton Court Conference, Peace of Utrecht, Dispensing Power, Septennial Act, Letters of Junius, the Pelhams, Abolition of Slavery.

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

[N.B.—Two questions only in each section are to be attempted.]

A.

1. What were the chief features of the Feudal System, and over what period in English history did this system extend?

2. Give the dates of the English sovereigns from 1066 to 1603, and mention their relationship to one another.

3. On what three grounds did William I. base his claim to the English crown? How far were these claims justified?

4. What was the attitude of the first four sovereigns (William I.-Stephen) towards the Church?

B.

1. Relate the most important events in the reign of King John.

2. Write a short biography of the Black Prince.

3. With the aid of the following mnemonic—"*A*ll *l*ittle *b*oys *n*ever *w*ill *m*ention *a*ll *t*hese *h*orrid *h*ateful *b*attles *to* *B*osworth"—mention the battles fought in the Wars of the Roses, and give an account of any one of them.

4. Give (with dates) the main provisions of—the Constitutions of Clarendon, Magna Charta, the Statute of Mortmain, the Statute of Præmunire.

C.

1. Give a brief account of the following persons: Simon de Montfort, Caxton, Hampden, Bacon, Jeffreys.

2. Draw up a genealogical table showing the descent of James I. from Edward III.

3. Give the chief events in the reign of Henry VII. or of Edward VI.

4. Assign events to the following dates: B.C. 55; A.D. 449, 597, 1204, 1215, 1346, 1356, 1360, 1485, 1588, 1605, 1689, 1760, 1776, 1815.

D.

1. Give the main provisions of the Bill of Rights, the Peace of Ryswick, and the Treaty of Utrecht.

2. What were the causes of James the Second's unpopularity?

3. Write a brief life either of Nelson or of Wellington, specifying the chief battles fought.

4. Give an account of any battles you know of in India that were important in the founding of the English Empire there.

E.

1. Mention the chief events in the reign of George II. or of William IV.

2. Give the dates of the Hanoverian sovereigns; show their relationship to one another, and trace the descent of George I. from James I.

3. What causes led to the American War? Give the names of two battles in it.

4. Sketch the political career of Walpole, or of Pitt, Earl of Chatham.

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

1. Discuss the political and religious results of the revolution of 1688.

2. Describe the negotiations leading to the parliamentary union of England and Scotland, and the conditions on which union was secured.

3. Give a brief account of the career of Sir Robert Walpole, with especial reference to his policy.

4. "The expansion of England in the New World and in Asia is the formula which sums up for England the history of the eighteenth century." Discuss this statement as fully as you can.

5. Give an account of the events that led to the loss of the English colonies in America.

6. What do you know of George Canning? Discuss his foreign policy.

7. Describe the political agitation that led to the passing of the Reform Bill of 1832. Mention the abuses that this bill was intended to remedy, and give its provisions.

8. Give some account of the industrial development of England between 1780 and 1837.

9. Write short notes on the following subjects : Letters of Junius, Septennial Act, Forty-five, John Wesley, Warren Hastings, William Huskisson.

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

1. (a.) Decline throughout, *alter, ipse ;* in singular only, *alius, se, splendide mendax ;* in plural only, *vivida vis.*

(b.) Parse fully *feris, duce, versus, voti, vis, canis.* If any of the words has more than one value, indicate it.

3—E. 1A.

(c.) Give meaning and chief parts of *fingo, figo, fungor, findo ;* of *cresco, horresco ;* of *lavo, faveo.*

Conjugate the present subjunctive active of *edo* (2) ; the imperfect subjunctive of *ingredior ;* the imperative active and passive of *facio ,* the present indicative of *nequeo.*

(d.) In the following words distinguish the difference of meaning, if any, in singular and plural : *bonum, carcer, hortus, auxilium, littera, rostrum, comitium, aedes.*

What classes of nouns are used in the plural only ? Give examples of each class.

2. (a.) What is the construction with the following verbs : *utor, potior, moneo, commonefacio, impero, memini ?* Give examples to illustrate each.

(b.) How are the various relations (duration, &c.) of time expressed in Latin? Translate *Respondit se paucis illis diebus argentum misisse Lilybaeum.*

(c.) With what case or cases are adjectives " of plenty or want " constructed? Explain the use of the case.

(d.) Give in full the possible constructions after verbs of fearing. Translate " I am afraid he has not done it."

(e.) What different kinds of subordinate clause may be introduced by *cum ?* Give examples, and explain the relation of the *cum* clause to the principal clause in each case.

3. Translate into Latin :—

(a.) Thereupon Caesar ordered the cavalry to occupy the town in advance.

(b.) I do not know whether this is true or false.

(c.) As soon as the spies returned Caesar summoned the officers to a council of war.
[Spy = *speculator.*]

(d.) Are you not the man whom I saw yesterday ?

(e.) I believe you speak the truth, and that the enemy will make the attack.

(f.) He is not the man to accuse even his enemy falsely.

(g.) He says that he will never admit that this is the same as that.

4. Translate into English :—

Hunc ducem secuti nequiquam reclamantibus tribunis in clivum Capitolinum erigunt aciem. Adjungitur et Tusculana legio. Certare socii civesque, utri recuperatae arcis suum decus facerent. Dux uterque suos adhortatur. Trepidare tum hostes nec ulli satis rei praeterquam loco fidere. Trepidantibus inferunt signa Romani sociique. Iam in vestibulum perruperant templi, cum P. Valerius inter primores pugnam ciens interficitur. P. Volumnius consularis vidit cadentem. Is dato negotio suis, ut corpus obtegerent, ipse in locum vicemque consulis provolat. Prae ardore impetuque tantae rei sensus non pervenit ad militem : prius vicit quam se pugnare sine duce sentiret. Ita Capitolium recuperatum.

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

1. Translate into English :—

Au moins il est impossible de nous demander d'avoir, devant le cercueil de M. de Bismarck, les sentiments qu'un peuple peut avoir devant celui d'un ennemi d'un autre caractère. L'homme qui vient de disparaître, et qui semble avoir été un homme de résultats pratiques plus qu'un homme de convictions, a eu au moins toute sa vie une passion d'une effroyable sincérité : c'est sa haine de la France. On peut dire qu'il l'avait puisée dans le sein de sa mère et qu'il la portait dans le sang. C'est peu avant sa naissance que ses parents avaient dû fuir leur habitation de Schonhausen, occupé par les troupes victorieuses du premier Empire, et que nos soldats avaient irrespectueuse-ment balafré à coups de sabre et de baïonnette le tableau généalogique des Bismarck, étalé sur un des murs du château. Tout lui faisait exécrer notre nation : sa haine des aspirations populaires, son bigotisme politique, ses souvenirs de 1848, où il avait combattu en furieux le mouvement démocratique et national allemand sorti de notre Révolution.

Il ne semble pas qu'il ait cessé une minute de nous détester : pas même quand, ayant devant lui d'autres adversaires, il dut essayer de se servir de la France. Comme ambassadeur à Paris, il a certainement amusé le criminel songe-creux des Tuileries, avec ses idées de pillage de l'Europe en commun.

2. Translate into French :—

Gentlemen of the jury : You have been chosen by the laws of your State to fulfil a most unpleasant and trying duty—to give judgment in the case of The People v. Stanley Edgcumb, charged with the murder of Mancel Tewkes. It is presumed that you are all impartial and fair-thinking men, and as such you are chosen. You are actuated by all the common impulses of men ; you feel, think, and act as other men do, and you cannot for a moment forget that it is upon the life of a human being, one who thinks, feels, and acts as one of yourselves, that you are about to pass judgment. Stanley Edgcumb is one of Nature's noblest productions. He is the soul of honour and truthfulness ; of such nobility of nature that he could not find it in his heart to commit a crime. He does not stand before you as a suppliant for mercy, but he stands with innocence stamped upon his brow, and demands that innocence shall not be made a cat's-paw for crime.

3. Translate into French :—

The French Revolution began its course in the year one thousand seven hundred and eighty-nine. Louis the Sixteenth was then king.

Happy the people whose history is uninteresting !

You come in the nick of time.

The more one learns the more he wants to learn.

I am glad to hear you have had good news.
Show the doctor your tongue.
The lion is the king of beasts, and the rose is the queen of flowers.
Let us not forget the poor.

4. Form French verbs from the following: *Cas, cour, effroi, feuille, genou, grand, hardi, pauvre, rhume, rude.*

5. What difference is there in meaning between—
    (a.) *la justice* and *la justesse ;*
    (b.) *la côte* and *le côté ;*
    (c.) *le foudre* and *la foudre ;*
    (d.) *le cou* and *le coup ;*
    (e.) *se baisser* and *s'abaisser ;*
    (f.) *anoblir* and *ennoblir ;*
    (g.) *cacher* and *cacheter ;*
    (h.) *conte* and *compte ?*

6. Give the French for—
He was joining, that he may join, he has joined ;
He dies, we shall die, let him die ;
He sees, he saw, he will see ;
He goes away, he will go away, let him go away ;
Does he not say ? has he not said ? that he might not have said.

7. Write in French words—
Hymn 200 ; half your cake ; William the Fourth ; 199 men ; on the first of August ; 14 and 17 are 31 ; two pounds and a half ; 280 pounds ; two-thirds ; one-fourth of your income.

8. Give full reasons for the concord of the past participles printed in italics in the following sentences :—
    (1.) Les enfants que j'ai *vus* dessiner étaient déja exercés.
    (2.) Les pièces que j'ai *vu* jouer ont été fort applaudies.
    (3.) L'assemblée fut moins indulgente que je ne l'avais *espéré*.
    (4.) Les huit mois que cette affaire a *trâiné* m'ont *paru* huit siècles.
    (5.) Je ne regrette pas la peine que ce travail m'a *coûtée*.
    (6.) Je leur ai *rendu* tous les services que j'ai *pu*.
    (7.) Elle s'était *proposée* comme garde-malade.
    (8.) Est-ce la première fois que Madame B. s'est *fait* peindre ?
    (9.) Mademoiselle, je vous ai *vue* peindre hier.
    (10.) Il supporte mal la grande chaleur qu'il a *fait* cet été.

9. Give the negative form of—*aisé, bienfaisant, content, habillé, heureux, habité, fidèle, hérité, loyal, légitime.*

10. What is the spelling of the French form of the words—cannon, example, garrison, admiral, infantry, judge, amiable, captain, brilliant, tyrant ?

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

1. Decline in the singular : *Marie, die kleine Julie, Herr Schmidt, Frau Schneider, Fräulein Koch.*

2. Give the meaning of the following words, (1) when masculine, (2) when neuter : *Band, Bauer, Lohn, Schild, Thor.*

3. Decline in full : *Der breite Fluss, die gute Tochter, das grosse Buch.*

4. Translate : Of one kind, three times, double, once, one and a half.

5. Translate : Three of us, on your account, for my sake, I am ashamed of him, both of you.

6. Give in full the present indicative and the imperative of *sich freuen.*

7. Translate : Every other day, gradually, the day after to-morrow, about two o'clock, nowadays.

8. Mention five prepositions governing the dative.

9. Give and illustrate by examples the various meanings of *lassen.*

10. Write out the first person singular of every tense and mood of *werden.*
Translate into German :—
    (1.) Oh, by-the-by, did you receive a letter from your brother this morning ?
    (2.) Yes, I did ; he is enjoying his stay in Heidelberg very much indeed.
    (3.) I suppose that he can now speak German quite well ?
    (4.) He ought to, for he has been four years at the University of Heidelberg.
    (5.) Do you expect him back before the end of the year ?
    (6.) Oh, no ; he is going to the Paris Exhibition before he returns.
    (7.) He will not like to settle in this country after having been so long in Europe.
    (8.) Like all New-Zealanders, he will prefer to live in his native land.
    (9.) Well, he and I were always great friends, and I shall be very glad to see him again.
    (10.) He has not forgotten you, for he never writes without mentioning your name.

11. Translate :—

(The Two Goats.)

Zwei Ziegen begegneten einander auf einem schmalen Stege, der über einen tiefen reissenden Waldstrom führte ; die eine wollte herüber, die andere hinüber.

" Geh mir aus dem Wege! " sagte die eine. " Das wäre mir schön," rief die andere. " Geh du zurück und lass mich hinüber ; ich war zuerst auf der Brücke."

" Wass fällt dir ein? " versetzte die erste ; " ich bin so viel älter als du, und sollte dir weichen ? Nimmermehr ! "

Beide bestanden hart näckiger darauf, dass sie einander nicht nachgeben wollten ; jede wollte zuerst hinüber und so kam es vom Zanke zum Streite und zu Thätlichkeiten. Sie hielten ihre Hörner vorwärts und rannten zornig gegen einander. Von dem heftigen Stosse verloren aber beide das Gleichgewicht ; sie stürzten mit einander über den schmalen Steg hinab in den reissenden Waldstrom, aus welchem sie sich nur mit Mühe ans Ufer retteten.

—Grimm.

Translate also :—

Im Garten klagt die Nachtigall
Und hängt das feine Köpfchen nieder ;
Was hilft's, dass ich so schöne Lieder
Und wundersüsse Töne habe—
So lange ich mein grau Gefieder,
Und nicht der Rose Schöne habe !
Im Blumenbeet die Rose klagt :
Wie soll das Leben mir gefallen?
Was hilft's, dass vor den Blumen allen
Ich Anmuth, Duft und Schöne habe—
So lang ich nicht der Nachtigallen
Gesang und süsse Töne habe !
Mirza-Schaffy entschied den Streit.
Er sprach : Lasst Euer Klagen beide,
Du Rose mit deinem duft'gen Kleide,
Du Nachtigall mit dienen Liedern :
Vereint, zur Lust und Ohrenweide,
Der Menschen, Euch in meinen Liedern !

—" Mirza-Schaffy " (Friedrich Bodenstedt).

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

1. Write down the algebraical expressions of the following :—
   Subtract from the number x one-half the excess of the number y over the number z, and divide the remainder by that number which when multiplied by itself will give the sum of the numbers x and y.
   Calculate the value of the expression when $x=5$, $y=4$, $z=3$.

2. Multiply together $5x - 2\{(x-3y)+5(y-2z)\}$ and $3[4x-y-2\{y-3(z-x)\}]$

3. Divide $a^5 - \frac{23}{30}a^4 + \frac{31}{10}a^3 - \frac{7}{3}a^2 - \frac{181}{18}a + \frac{5}{3}$ by $a^2 - \frac{a}{6} + 5$

4. Resolve the following expressions into factors :—
   (a.) $15x^2 - 16xy - 15y^2$

   (b.) $(x-2y)^2 - \frac{9}{10}(x-2y) - \frac{9}{10}$

   (c.) $(2x+3y)^3 - (3x-2y)^3$

   (d.) $x^4 - 2x^3 - 2x - 1$

5. Simplify the following expressions :—
   (a.) $\dfrac{2x^3 + 2x^2 - 26x + 28}{3x^3 - 48x + 63}$

   (b.) $\dfrac{3a-b}{3a+b} - \dfrac{2a-b}{2a+b} - \dfrac{a-b}{a+b} + 1$

6. Pick out the coefficients of x^3 and of x^2 in the product of—
   $x^3 - (3a+1)x^2 - 2a^2x + a^3 - 1$ and $x^2 + (2a+3)x - 3ax(a+1) - a^3$

7. Write down the square of $2x^3 - x^2 - 3x + 2$, arranging your answer in order of ascending powers of x.
   Find also the square root of $4x^2 - 12xy - 20xz + 9y^2 + 30yz + 25z^2$

8. Solve the equations—
   (a.) $\dfrac{12x-5}{3x-2} = 2 + \dfrac{2x-15}{x-10}$

   (b.) $\begin{aligned} ay + bx &= bh \\ ky + hx &= a^2 \end{aligned}$

9. A man makes a journey partly by coach and partly by train : he travels p hours in the coach at q miles an hour : he then waits 20 minutes for the train, and travels in it for a hours at the rate of 25 miles an hour. If he rides a bicycle all the way back at the rate of x miles an hour, and rests for 2 hours on the way, find how long he was in returning.

10. A man invests £3,945 10s. partly in the 3½-per-cents at 101¼ and partly in the 2¾-per-cents at 96½ : his total income being £123 10s., find how much he invested in each kind of stock.

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

1. Find the value of $\sqrt{\frac{x+y}{x-y}} - \sqrt{\frac{x-y}{x+y}}$, when $x=\frac{1}{4}$, $y=\frac{1}{5}$; and also when $x=a+b$, $y=a-b$.

2. Multiply $\frac{1}{3}x^a - \frac{1}{2}x^b$ by $\frac{1}{2}x^a + \frac{1}{3}x^b$, and divide $25x^3 - 16x^2 - 8x - 1$ by $5x^{\frac{3}{2}} + 6x + 2x^{\frac{1}{2}} + 1$.

3. Find the highest common measure and the lowest common multiple of the following expressions :—

    (a.) $x^4 - xy^3$, $(x^3 - xy^2)^2$, and $(x^2 - xy)^3$

    (b.) $25x^4 - 1$ and $20x^4 + x^2 - 1$

    (c.) $a^2 + 2b^2 + (a+2b)\sqrt{ab}$ and $a^2 - b^2 + (a-b)\sqrt{ab}$

4. Simplify the expressions—

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

    (b.) $\frac{3a}{(a-2x)^2} + \frac{2a+x}{(a+x)(a-2x)} - \frac{5a}{(a+x)^2}$

    (c.) $\frac{\sqrt{x+1} + \sqrt{x-1}}{\sqrt{x+1} - \sqrt{x-1}}$

5. Show that, if $x = \sqrt{a^2 - b^2}$, then $\sqrt{a+b} = \sqrt{\frac{a+x}{2}} + \sqrt{\frac{a-x}{2}}$, and $\sqrt{a-b} = \sqrt{\frac{a+x}{2}} - \sqrt{\frac{a-x}{2}}$

6. Extract the square root of $1 - x$ to five terms.

7. Solve the equations—

    (a.) $\frac{a}{x} + \frac{b}{x+a} = \frac{b+a}{x+b}$

    (b.) $\sqrt{x} - \sqrt{a+x} = \sqrt{\frac{a}{x}}$

    (c.) $xy = a(x+y)$, $xz = b(x+z)$, $yz = c(y+z)$

8. If A's money were increased by thirty shillings he would have three times as much as B; and if B's money were increased by thirty shillings he would have twice as much as A: find the sum possessed by each.

9. A has performed $\frac{m}{n}$ of a piece of work in p days; B then comes to help him, and they finish it in q days: in how many days could each do it separately?

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

1. What constructions does Euclid *assume* can be made?
Draw from a given point a straight line (a) equal to a given straight line, (b) equal to a given straight line and in a given direction.

2. Show that if from the ends of a side of a triangle there be drawn two straight lines to a point within the triangle, then these straight lines shall be together less than the other two sides of the triangle, but shall contain a greater angle.
A square has a square grass-plot having its diagonals on the diagonals of the square. Draw in a figure the shortest path leading from one corner of the square to the opposite corner, without crossing the grass. Show that its length is greater than half the perimeter of the plot, and less than half the perimeter of the square.

3. Show that two triangles are identically equal if they have two angles of the one equal to two angles of the other, each to each, and the side adjacent to the equal angles in one equal to the corresponding side in the other.
Show that the straight line drawn from the vertex of an isosceles triangle perpendicular to the base divides it into two identically equal triangles.

4. Show that two triangles are equal in area—
    (a.) If they are on equal bases and between the same parallels;
    (b.) If the rectangle contained by the base and altitude of one is equal to that contained by the base and altitude of the other.

5. Show that in a right-angled triangle the square described on the hypotenuse is equal to the sum of the squares described on the other two sides.
Having a given straight line one inch in length, construct, as simply as you can, one equal to $\sqrt{10}$ inches.

6. Prove that the rectangle contained by two straight lines, each divided into any number of parts, is equal to the sum of all the rectangles severally contained by one part of the one and one part of the other. Show that this includes Euc. II., 1, 2, 3, 4.

7. If a straight line is divided into two equal parts, and also into two unequal parts, prove that the sum of the squares on the two unequal parts is twice the sum of the squares on half the line and on the line between the points of section.

8. The base of an isosceles triangle is divided *externally* at a point: show that the rectangle contained by the segments of the base, together with the square on one of the sides, is equal to the square on the straight line joining the vertex to the point of section of the base.
What corresponds to this theorem when the base is divided *internally*?

Euclid (Books I.–IV.).—For Senior Civil Service.   Time allowed : 3 hours.

1. Distinguish between a right angle and a rectangle, between a rhombus and a rhomboid, between a diameter and a diagonal, and between a segment and a sector of a circle.

2. If two triangles have two sides of the one equal to two sides of the other, each to each, and likewise their bases equal, the angle which is contained by the two sides of the one shall be equal to the angle contained by the two sides equal to them of the other.

3. The opposite sides and angles of a parallelogram are equal to one another, and the diagonal bisects it.

Conversely, prove that a four-sided figure is a parallelogram—(1) if its opposite sides are equal, (2) if its opposite angles are equal, (3) if each diagonal bisects the figure.

4. Given the sum of the side and the diagonal of a square, it is required to construct the square.

5. If a straight line be divided into two equal and also into two unequal parts, the squares of the two unequal parts are together double of the square of half the line, and of the square of the line between the points of section.

6. The opposite angles of any quadrilateral figure inscribed in a circle are together equal to two right angles.

Show that if the inscribed figure is a parallelogram it must be a rectangle. Investigate the conditions under which the inscribed rectangle has the greatest magnitude.

7. If two circles touch each other externally, and two parallel lines be drawn touching the circles respectively in points A and B so that neither circle is cut, the straight line joining A and B will pass through the point of contact of the circles.

8. If from any point without a circle two straight lines be drawn, one of which cuts the circle and the other meets it : then if the rectangle contained by the whole line which cuts the circle and the part of it without the circle be equal to the square of the line which meets it, the line which meets it shall touch the circle.

9. To describe a circle about a given triangle.

If the perpendiculars let fall from the angles A, B of the triangle ABC upon the opposite sides intersect in F, the circle described about the triangle ABF shall be equal to the circle described about the triangle ABC.

10. To inscribe an equilateral and equiangular hexagon in a given circle.

Show that the square of a side of the hexagon is one-third of the square of a side of an equilateral triangle inscribed in the circle.

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

1. Define the units of " velocity " and " acceleration." If the unit of time were changed from a second to a minute, and the unit of length from a foot to a yard, how would the units of velocity and acceleration be affected ?

2. Prove the formula for the space passed over when a body falls from rest under the action of gravity.

Find the space which a falling body passes over during the fourth second from rest.

3. Define " work " and " power." What is meant by a " horse-power " ?

A ten-horse-power engine is to be employed in pumping water from a mine 440 ft. deep. Taking the weight of a gallon of water as 10 lb., find the number of gallons of water which the engine can raise in an hour.

4. What is meant by a " resultant " force, and by the " composition " of forces ? Show how to find the resultant force in direction and magnitude when two equal forces are inclined to one another—(1) at a right angle, (2) at an angle of 120°.

5. If two forces meet at a point, show that the algebraical sum of their moments about any other point in their plane is equal to the moment of their resultant about the same point.

6. Weights of 3 lb. and of 9 lb. are suspended from the ends of a uniform rod weighing 6 lb. Find the length of the rod when it balances about a fulcrum placed 6 in. from its middle point.

7. In a screw press the length of the power arm is 3½ ft., and the thread of the screw makes 20 turns in a length of 3 in.: find the force that must be applied (neglecting friction) to produce a pressure of 11 tons.

8. Describe the barometer, and explain its use.

Taking the average height of the barometer as 29·9 in., and the specific gravity of mercury as 13·6, calculate approximately the ordinary atmospheric pressure.

9. Show that the weight of a floating body is equal to the weight of the liquid which it displaces.

The volume of a piece of metal is 144 cub. in., and its specific gravity is 10·8. If it is supported by a string, find the tension of the string before and after the metal is immersed in water, assuming the weight of a cubic foot of water to be 1,000 oz. avoirdupois.

10. Describe the method of determining the specific gravity of a liquid by Nicholson's hydrometer.

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

1. How would you demonstrate experimentally that liquids expand with heat ? Distinguish between the apparent and the absolute expansion of a liquid.

Taking the density of mercury at 0° C. as 13·6, and at 100° C. as 13·358, find the mean coefficient of expansion of mercury between these temperatures.

2. Define the boiling-point of a liquid, and note its chief characteristics. What is meant by the " normal boiling-point " of a liquid ? How would you illustrate experimentally the distinction between the " boiling-point " and the " normal boiling-point " of a liquid.

3. What is meant by "latent heat"? Describe a method of determining the latent heat of water.

4. How many pounds of steam at 100° C. will be required to melt 20 lb. of ice at 0° C.?

5. Distinguish between transverse and longitudinal vibrations, and between progressive and stationary vibrations. Explain the phenomenon of resonance. A tuning-fork whose vibration number is 280 is mounted on a resonance box: what should be the length of the box?

6. Draw a diagram illustrating the formation of a virtual image by means of a convex lens.

A lens of 6 in. focal length is used to throw upon a screen an image of an object magnified six times: at what distances from the screen must the lens and the object respectively be placed?

7. Explain the cause of colour in transparent and in opaque bodies. What are complementary colours? What is meant by "chromatic aberration"?

8. How would you magnetize a steel knitting-needle? What properties would it thereby acquire? Explain what is meant by "magnetic induction." How would you demonstrate experimentally the induction of the earth's field?

9. Describe the following instruments: the dip-circle, the electrophorus, the tangent galvanometer.

10. Give an account of the thermal effect of an electric current, stating the conditions that may modify that effect.

11. A Daniell's cell gives a current of 0·2 ampere through an external resistance of 5 ohms; but when the external resistance is increased to 10·5 ohms the current falls to 0·1 ampere. Find the internal resistance and EMF. of the cell.

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

1. State under the following heads what you know of acetylene: (a) the manufacture of it on the large scale, (b) its weight compared with the weight of an equal volume of air, (c) the number of gallons of air required to burn completely 100 gallons of it.

2. Show by equations the action of heat on the following compounds: Orthophosphoric acid, sulphuric acid, ammonic chloride, arsenetted hydrogen passing through a tube, arsenetted hydrogen in the open air.

3. Give the names and formulæ of all acids that you know of that contain—(a) sulphur, (b) phosphorus, (c) chlorine, (d) boron.

4. State what you know of the process of manufacturing bromine from sea-water.

5. Describe two processes for making hydriodic-acid solution, giving the equations.

6. Describe experiments to determine the composition of water—(a) by weight, (b) by volume.

7. How would you prove by experiment that chlorine constitutes half the volume of hydrochloric-acid gas?

8. How many gallons of uncombined oxygen will be left after the explosion of 10 gallons of methane (firedamp) in a closed space with 110 gallons of air?

9. Define the following terms as used in chemistry, and give examples of their application: nascent, amorphous, dimorphous, isodimorphous, allotropic, equivalent, critical temperature, deliquescent, hygroscopic, monobasic acid, tribasic acid.

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

[N.B.—Candidates must answer questions in one branch of the subject only. All answers should be illustrated when possible, by diagrams.]

Animal Physiology.

1. What is a gland? Describe the glands of the human skin.

2. Describe the structure and functions of the spinal cord in man.

3. Describe the structure of the human eye.

4. State what happens to the constituent parts of a piece of bread-and-butter in the alimentary canal.

5. Describe and explain the differences between arterial and venous blood.

6. Explain what is meant by the terms "cell" and "tissue."

7. Describe the minute structure of bone.

8. How is it that the temperature of the human body is practically constant, notwithstanding changes in the temperature of the surrounding atmosphere?

Botany.

1. Give an account of the order *Compositæ*, with special reference to the New Zealand representatives thereof.

2. Refer the following plants to their respective natural orders, and describe the flower of each: fuchsia, clematis, sorrel *(Rumex)*, veronica.

3. State what you know about chlorophyll and its functions.

4. Describe the mode of occurrence, structure, and functions of root-hairs.

5. Describe the minute structure of a foliage leaf.

6. Point out, with the aid of diagrams, the difference between epigynous, perigynous, and hypogynous flowers.

7. Explain what is meant by the terms "simple," "compound," "pinnate," "palmate," "stipulate," "petiolate," and "peltate," as applied to leaves.

8. Describe fully the structure of the seed of a bean *(Vicia)*.

Shorthand.—For Senior 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.*) 80 words a 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. 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.

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.

PASSAGES FOR DICTATION.
(*a.*) At the rate of 80 words a minute.   Takes 10 minutes.

As workmen of all kinds grow in intelligence their capacity for a larger use of money expands, and the necessary provision must be made for their dietary, clothing, educational and recreational requirements. The possession of money and leisure will enhance the legitimate channels of enjoyment of an increasing number of members of the industrial community, tending to bring the whole into conditions of greater equality and happiness. The new order

1 of things may not be so favourable to the creation | of millionaires, although the enlarged sphere of operations will still leave them wide scope, but it is certainly adding to the number of those who are treasurers of the world's capital. That is a very different thing from the assumption of the pernicious State control of capital which a small section of people advocate. It gives to the people who are industrious an increasing share of the product of their work, but leaves

2 them to control its employment and use | free from the interference of that other section who may be industrious and not provident, or who may be neither industrious nor provident.

But there is a less pleasant side to this change in the proportionate distribution of the proceeds of the labour and capital of the day. If the addition of £542,000 to the wage list and

3 the deduction of £270,000 from the dividend list of certain | British railway companies mean in any way a reduction of the available capital for the use of the nation, the change will not be entirely in the interests of the workers. Should any considerably larger proportion of the whole be absorbed in drink, or wasted on what, in an extreme way, may be said to perish in the using, it obviously follows that there will be a check to that accumulation of capital which

4 furnishes a growing measure of employment | at ever increasing wages for the humbler members of the community. Rabid socialists seem always to overlook the fact that the millionaire is necessarily a public benefactor—that the evils arising from his riches, so far as the community is concerned, are overbalanced by the advantages. For while his own measure of wasteful expenditure is limited, his control or direction of his wealth benefits an enormous

5 number. If the capital of the world drifts too rapidly into the possession and | control of those who are not accustomed to its use, the worst features of millionairism may be extended, and the world's supply of capital available for the employment of an increasing population will not fructify so satisfactorily for the general benefit. Until people are educated to the proper use of money it will not be a blessing but a curse, not merely to those who receive more of it, but

6 to all members of the community who are depending upon | its judicious employment for the expansion of the spheres of employment.

Whether the increasing share of the fruits of capital and labour which are being distributed as wages is productive of more good or ill from these points of view is an interesting question, not very easily determined in any mathematical way. Still, if concurrently with the movement we see an increase in the deposits of the savings-banks, and a larger provision for

7 insurance and old age, there is | reason to take a hopeful view of the changing situation. The possession of a larger amount of wealth must be expected to produce a more generous style of living, which cannot be condemned except in so far as it may result in the neglect of the opportunities afforded for the inevitable claims of sickness and old age. So much must be fairly allowed, and we see this in operation in the wider dietary consumption of the British popula-

8 tion. Of all | articles of food that at one time were luxuries Mulhall and others show the extending consumption, only to be understood through an increase in the number of people

9   who have come into the enjoyment of them.   But at the same time these authorities show
      that the savings banks' deposits and the industrial insurance returns are also growing even
      more rapidly than the population.   The funds thus conserved are none the less capital though
      owned by the multitude of workers and | administered by commissioners or insurance direc-
      tors.   They enter into the service of the State as the basis of employment for the people
      just as much as if they were funds controlled and directed by a millionaire.   But they are
      the capital of the industrious and the provident.   And in these directions we can see the bene-
      ficial accumulation of funds which are available for the alleviation of suffering and the pro-
10   vision of comfort in the inevitable time of want. |

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

         Well, gentlemen, having told you of the opposition which is being offered to the measures
      which we are proposing, I daresay it will be asked in many a quarter, " Why have you added
      to your difficulties by a measure which you have introduced in connection with the Budget—
      namely, a measure which, to a certain extent, deals with the licensing question ?   Why should
      you have embarked on a measure of that thorny character at a time when you have plenty to
      do ? "   Although I have detained you long enough already, I ask to be allowed on this ques-
      tion to say a few words, very earnest words, because I feel very strongly on the question.
1   Some of you may possibly have | done me the honour to read the speech in which I intro-
      duced the Budget, or, if not, you have seen some epitomes of it.   They will have told you that
      one of the chief features of the economic conditions of the past year has been the immense
      consumption of alcoholic liquors.   There was a vast increase in the quantities of spirits and
      beer which had been drunk.   It may also have appeared to you that it was clear that spirits
      would bear an additional duty, and under these circumstances, looking to the effect made upon
      our minds, and, as we believed, an effect which would be made on the minds of the country, we
2   thought that the moment had come | to see whether some practical common-sense step could
      not be taken to arrest the increase in the number of houses selling alcoholic drink.   We
      thought the moment had come, and that we should receive support almost from all sides in
      dealing with this difficult question.   The temperance party have done their best for years and
      years, but since the time when Lord Aberdare's Bill failed no real progress has been
      made in the direction of diminishing the number of licensed houses.   We thought,
      and we think, that the party of temperance will be sensible enough to go into any
      arrangement which will offer the hope of diminishing the number. of houses which tempt to
3   drink.   We most of us | in this room, I daresay, are of opinion that there ought to be, and
      that it is proper that there should be, a sufficient number of places where beer and spirits are
      sold to meet the legitimate necessities of any neighbourhood.   But we are equally clear that
      they ought not to be multiplied to a degree which constitutes an abuse.   That being so, we
      thought that we could propose measures to the House which, without being either against the
      extreme doctrines of the temperance party, or without treading upon the legitimate interest of
      the public, might promote the great cause of temperance.   We have not done that which many
4   of our critics have declared we have done.   I myself have | lately, during the past few days,
      when I have gone to the House of Commons—I have been buried in a vast avalanche of letters,
      and I have had to fight my way through a yellow fog of telegrams.   Every temperance asso-
      ciation in the country has been bombarding me and my colleagues.   (A voice : " Serve you
      right.")   Yes, it would have served us right if they had issued their telegrams and written
      their letters when they had seen our proposals.   But they were sent before they had seen
      them ; that is the interesting point.   And they charge us with having introduced a novel and
      dangerous recognition of vested interests.   That which we have proposed is neither novel nor
5   is it | dangerous.   It is supposed that in our Bill we offer compensation to every publican.
      We do no such thing.   No, we leave the present law, with regard to the discretion of the
      licenses, precisely where it is.   If the Justices, acting judicially, consider that they ought not
      to renew a license, they will retain the same discretion which they have exercised hitherto,
      and there will be no compensation whatever for the suppression of such a license.   The
      position of the Justices will be precisely the same.   But what we do is to give to the
      County Councils the power to diminish, side by side with any action which may be
6   taken by the Justices—the power to diminish the number | of licenses by purchasing the
      goodwill of the house.   I am almost sorry, and I think I have made a blunder in reserving
      this part of my speech for the end, because I am anxious that it should be thoroughly understood.
      We are creating no new rights ; more than that, we have a clause in our Bill that no proceed-
      ings under that Bill should create any greater interest in any public-house, or should increase
      its value as compared with its value before it has passed.   We have taken care that no action
      of ours should, so to speak, increase against the public the value of the public-house.   That we
7   have done for the protection of the public, but we do | desire and we ask the co-operation of
      the temperance party in this behalf.   We do desire that no fanaticism, no stickling for any
      particular point, no theoretical objection should impair us in our determinated resolution to
      attempt to diminish the number of licensed houses.   We are exceedingly desirous of diminish-
      ing the number of public-houses, and if our friends defeat our Bill theirs will be absolutely
      fruitless and vain, and so I ask the party of temperance to co-operate if they can with the
      Government and to bring no technical objection forward like this, but to deal with it as practical
      men.   We wish to celebrate the alliance which has existed for four years by beneficent legisla-
8   tion.   You heard Mr. Lea, | an advanced Liberal, say that he was satisfied with much that the
      Government has done.   We believe that we have been able to add a goodly list of measures to
      the statute-book, and we are not content to leave that where it is.   We intend to continue to
      add to that list if we can.   We feel that an immense obligation is imposed upon us by our

      4—E. 1A.

position, by our faithful allies, by our large majority, and by the confidence we believe the country reposes in us. We are ambitious that the present Parliament should continue to do such good work that men may say, " Elected to save Ireland for the nation, it has at the same

9 time carried **|** beneficent legislation for England and Scotland as well." I have heard that our opponents have put about an idea that we were going to have a general election at once. Not yet ! Not at all. We have yet to add further to that, which I hope I may call the claims of the Unionist party upon the gratitude of the country. I heard that the remark that au election was to take place had been traced to me, and that I had been one who had spoken of a dissolution as proper and right. I cannot understand why I should have been picked out as

10 having held the language of a lunatic. Sometimes there is a shadow of a foundation **|**

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

Various statements have been appearing in the press with regard to a scheme for antarctic exploration to be undertaken by this country. They are mostly wide of the truth. There is no doubt, however, that the idea of a British antarctic expedition is in the air. The enthusiasm for polar exploration is always more or less latent in the British public ; it has been easily fanned into a glowing heat by the thrilling story of the Norwegian arctic expedition as told by Dr. Nansen. It was by an adventure that our progenitors obtained possession of these islands, and the history of the growth of the British Empire is but the record of one adventure after another all over the face of the earth. Much of the accumulated glory which is the heritage of every Briton has been derived from the adventures of those of our countrymen who

1 have pushed their **|** way with success into the unknown lands and seas of the globe. In popular estimation, it may safely be said, the many expeditions, national and private, that have pushed their way into the ice-bound ends of the earth hold the first place.

During the first fifty years of the century expedition after expedition was sent out by the Government to the region around the North Pole. The one serious attempt to explore the Antarctic under Ross, fifty years ago, was made under Government auspices. Although, after the Franklin search expeditions, exploring enterprises were not so frequent on the part of our Government, still it was considered necessary to maintain the old reputation of this country for enterprise of this kind by equipping at intervals exploring expeditions under Government auspices. Two of the most recent of these were the " Challenger " expedition, which devoted

2 three years to the investigation **|** of the oceans, with results that have won the admiration of all civilised nations, and the arctic expedition under Sir George Nares, during which Commander (now Admiral) Markham beat all previous attempts to approach the Pole. It is twenty years since these two expeditions completed their work. Whatever may be the case with oceanic exploration, in which much yet remains to be done, it seems to be the general opinion that, so far as the Arctic is concerned, its further exploration may be left to private enterprise or to other nations. But it is different with the Antarctic. Since Ross's expedition, over half a century ago, practically nothing has been done for the exploration of the great blank which caps the southern end of the earth, happily now the greatest blank on its surface.

3 One or two whaling trips that have been made into the region have only served **|** to show how little can be done at present by means so insignificant. The " Challenger " was not fitted for ice-work, and so only ventured to cross the antarctic circle and turn back. So far, then, this great national enterprise was incomplete. For over three years past the question has been asked among those interested in the completion of our knowledge of the globe and in the promotion of certain departments of science—Is our Government prepared to finish the work so well begun over twenty years ago ?

Abroad and at home it seems to be taken for granted that antarctic exploration is peculiarly the work of England, both as the country of Ross and as the mother-country of Australia. Over two years ago the late Government was approached by an influential deputation, which was treated with discouraging levity by a prominent Minister, who was

4 present with the First **|** Lord of the Admiralty. About eighteen months ago Mr. Goschen was approached, and it is not surprising that in view of the threatening prospects at the time he could not give a favourable answer. At the same time he was sympathetic. More recently, it is understood, he was again approached by the Royal Geographical Society, and although he was even more sympathetic, still it is believed that he hesitates to commit the Government to an expedition that might involve the employment of a few officers. It is not, it is believed, a question of money. Nor is it one of ships ; for the vessels used have to be either whalers or wooden ships built for the purpose. So far as can be learned, the question of sending out a national antarctic expedition has not been seriously considered by those responsible for the

5 credit and honour of the country.**|**

Shorthand.—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 a 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. 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.

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.

PASSAGES FOR·DICTATION.

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

The average schoolboy will work his fingers to the bone if he has reason to think that a bicycle will crown his efforts (says a writer in "Chums"). By way of experiment a schoolmaster once promised to give a beautiful machine to the boy who proved himself most worthy

1 of | it, and stipulated that all who entered the competition should work hard for a whole week, at the end of which time they would be required to submit an account of the way they had spent their spare hours. Excitement reigned supreme during the next six days, and many

2 a | home was turned topsy-turvy by zealous competitors for the coveted "bike." Every lad chose a different method of showing his ability, and some of the claims handed in were decidedly original. One boy built a substantial workshop, but discovered when he had finished it that

3 he had forgotten to | leave a space for the window; another actually made a coffin—"Just your size, sir," he told the master naïvely; while a third constructed a pretty gingerbread model of the village church, the chances of which were slightly spoilt by the marks of some

4 predatory teeth on the spire. The | majority of the lads, however, selected scholastic subjects, and the most marvellous achievement in this line was that of a fifth-form boy, who, without any previous knowledge of shorthand, tackled an old-established stenographic system, and

5 mastered it so thoroughly that at the end of the week he could | write sixty words a minute, and transcribe his notes accurately into the bargain. One musical genius confidently claimed the bicycle because he had learnt the Jew's harp, the tin whistle, and the trombone, and was indignant when the schoolmaster passed him over. The prize was eventually awarded to an

6 athletic | youngster, who, with inexhaustible patience and skill, taught thirty persons to swim within the time stipulated. The verdict in favour of the last-named feat was practically unanimous, and the disappointed competitors, gallantly crushing down their feelings, gave the

7 smiling winner a royal ovation. The youngest boy of an aristocratic but | needy family used to feel dreadfully ashamed when his chums invited him to accompany them on their rides, for he hadn't a bicycle of his own, and his father was utterly unable to provide him with one.

8 Thinking that this state of things had existed long enough, he one day resolved | to make a bold bid for fortune, and daringly carried his plan into effect. It was the beginning of the cricket season, and the boy, having completely hidden his identity by disguising his features

9 and wearing well-fitting but shabby clothes, went day after day to a popular county ground | and sold penny packets of sweets to the spectators. There was something is his easy, graceful manner and refined accent which attracted general attention to him, and long before the conclusion of the season he had purchased his bicycle and confessed the deception to his parents,

10 who were very angry. |

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

Sir, in moving the second reading of this Bill, I think the difficulty which faces me to-day is to set out a better case than was established last year, for every one must admit that the merits of the Bill last year were argued out in an exceedingly able and exhaustive manner. But, in spite of what appeared to me to be very strong arguments in its favour, the Council

1 last year was not in favour of the Bill. I | trust, however, that the lapse of time since then, the opportunities for reflection, and the further consideration of so much that has been said in its favour, will induce this Council to treat the Bill more favourably than they did on the previous occasion, especially as it comes up to us again indorsed by the approval of the House of Representatives, and after further revision and further amendment at the hands of the

2 popular Chamber. The Bill as we have | got it now, though altered in certain particulars, virtually is the same Bill as far as principle goes. It also is a Bill which must stand on its own merits. It has got to face the arguments of those who are always averse to taking any step in advance unless supported by the experience of past times and of other countries. A leap in the

3 dark is what it is called by its opponents, but leaps in the dark may | be really the rule with all of us in our private life, and must be the rule in the case of any progressive nation or community, whatever part of the world we like to look at, when occasion demands. The few leaps in the dark we have made in the past against the conservative instincts of the day have generally proved successful; but it may be judged to be a fact that the successes of any period are what

4 were | a few centuries, or decades, or even years, before looked upon as absurd and impossible

endeavours to arrive at perfection.   The Bill, Sir, provides, on a broad ground, that old-age pensions are a desirable thing for the colony to undertake, that they are properly the duty of the State, and that the general taxpayer, by means of the ordinary revenue, should provide these pensions.   In other countries where pension schemes have been established—in Europe—the

5 pensions rest on contributions | from the employers, the workers, and the State, conditions which are perfectly possible and practicable in those countries where movement is comparatively rare, and where the conditions of employment remain comparatively unaltered through men's lives—where the conditions of employment and the conditions of residence are matters of police inspection, and where at any time the worker can get a ticket which will testify to the fact

6 that he has paid up all his dues to the State in this | matter or that, and fulfilled every other public duty.   In the same way the employers are easily handled as far as their contributions are concerned ; but what is practicable in those countries would be absolutely impossible if attempted to be applied to our conditions.   Therefore the conditions of the European countries that have established national pensions schemes of a kind in which the State assists

7 are not applicable to us in our conditions.   The question then arises, Are we able | to propound a scheme which is practicable, which is advisable, and which will carry out what is intended by it ?   And, Sir, I would ask the Council, in looking at this question, not so much to look at it from the point of view of the objectors against a scheme of a national pensions fund, but to look at this rather with a sincere and even enthusiastic belief that the machinery that they

8 desire may be erected so that the | object can be obtained.   Criticism is all very right when it comes in its proper place, but the views and the expressions used by hostile critics as regarding this or any other proposal of reform, especially when it is a matter of construction, should be very properly discounted by the fact that the intention of these critics is not so much to construct as absolutely to destroy.   A most singular instance of how dangerous it is to put

9 matters of | this kind into the hands of a retrogressive body of intelligent men is pointed out very clearly by the treatment this question has received at the hands of the Committee which was set up in the year 1896 in the Old Country by the Conservative Government, who had pledged themselves on the hustings to make a national pension scheme part of their progressive policy.   They remitted the question to a Committee of nine, the chairman being Lord

10 Rothschild. |

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

   As the oldest member on the floor of this House, and as one whose privilege it was to know Sir Dillon Bell from the earliest days of my public life, and to be associated with him on terms of personal friendship, and of that high respect that belongs to a man of his character and attainments, the House will, I trust, excuse me if I say a few words in respect to the resolution which has been so well proposed and seconded and spoken to by members of this

1 House.   Sir, it is well that this House should do the | utmost it can on an occasion of this kind, though that utmost is but a very small thing, to show honour to the memory of one to whom honour is due in the highest degree.   Sir, it is the custom amongst all nations and all classes of people to show respect in some way or another to the memory of their dead. Loving hands put wreaths on the graves of those whose loss they mourn ; we in a Legislative Assembly of this kind take another mode of showing the respect and affection that we entertain

2 for those who pass away | from us, and with whom we have in days gone by wrought and thought and fought in the interests of the country to which we belong.   We place on what we believe to be the imperishable records of this House an expression of our regard and esteem.   Sir, I wish that I could do justice to the memory of the late Sir Dillon Bell, and I am sure all of us feel how incapable we are of doing justice to an occasion of this kind.   It is

3 some comfort, however, to feel that no failure on my part will detract | from the memory of a man who will never be forgotten, however inadequately his praises may be spoken in this House.   I remember Sir Dillon Bell in my early days when I entered political life, and recall his words of advice and encouragement.   Even then I looked upon him as an example, and as a model public man and public servant of the colony.   When at a later day he took the chair of this House, which had been previously occupied by one of the ablest and best men that New Zealand has ever seen—Sir David Monro—he ably | fulfilled the duties of that posi-

4 tion.   During the time he presided ever this House there was but one feeling—that of respect —for the work he did and for the manner in which he did it.   For four-and-twenty years he was a member of either one or the other branch of the Legislature.   Three times he held the responsible position of a Minister of the Crown.   In every position he held he was a credit to that position.   As has been stated by the Minister of Lands, his name will ever be entwined in

5 the history of our country. |

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

   1. Illustrate the use of the demonstrative pronouns *tenei, tena, tera,* translating the sentences you use.
   2. As there is no distinction of gender in Maori, how would you translate " he," " she," and " it " ?   Construct three short sentences illustrating your answer.
   3. Translate the following into Maori : Mine, yours, good, better, best.   Those one hundred and one good horses.   This is better than that.   The height of those twenty-one trees.   What are the names of the men who threshed your wheat ?   I will hold the rope of your horse.   Hoani is the man whom you saw on the beach.   There was a great fire in the town last night.   The horses which were lost yesterday have been found to-day.

4. Translate the following into English: I kitea e wai tenei motu? Kua karanga ahau i a ia. Nga hoe o tena poti. He hoiho papai. I konei a Hemi i te wa i tae mai ai te Kawana raua ko te Pihopa. Ma wai e rapu te pukapuka a Hoani? Ka makona a Hori kahore ona hiahia ki te kai. Mehemea kihai i wera toku whare kua noho koe ki konei.

5. Translate the following into Maori:—

Mr. HOUSTON (Bay of Islands) asked the Minister of Justice, Whether his attention has been called to a case reported in the papers of a Maori woman in the Mangonui County having died under the treatment of a *tohunga*, and whether he will take steps to prevent the recurrence of such a case? His object in bringing this question before the Minister was to put a stop, if possible, to the practice carried on among some sections of the Maoris by so-called *tohungas*. When an epidemic occurred these men were the cause of many of the Natives under their charge dying. In his own experience he knew of epidemics that had occurred among the Maoris, and he was aware too that a great many persons had died through these *tohungas*, and he was desirous, therefore, of bringing the matter under the notice of the Minister. As appeared from the question, his object was to prevent the occurrence of anything of the kind in the future; and, in the interests of the Natives, he hoped the Minister would see his way to introduce some stringent measure that would put a stop to the practice of the *tohungas*. Medical officers in several districts had spoken to him on the matter. They said that the interference of these men rendered their action null and void when they took the patients in hand. He trusted, therefore, the Minister of Justice would put a stop to the practices of the *tohunga*.

Mr. T. THOMPSON (Minister of Justice) said that on first reading the question he thought the honourable member had laid a large contract before him, but he understood what the honourable gentleman meant. There was a difficulty in dealing with Natives, who adhered to their primitive mode of treatment of the sick. In the particular case mentioned by the honourable member he might say that an inquest was being held, and steps would be taken through the Courts to proceed against the *tohunga* for causing the death of the woman.

6. Translate into English: I mua noa atu i noho he kingi pai ki tetahi wahi o Ahia. He nui tona aroha ki ana tangata, me tona tiaki pai i a ratou, me tona whakaaroaro tonu mo ratou, na reira ka utua atu e ana tangata tona aroha, ki te aroha ano. He roa tona whakahaeretanga i tona kingitanga i runga i te rangimarie, i te ora. Otira tera tetahi o ana hoa tata he toa nui; he nui te ope hoia a taua hoa, he whawhai tonu ki nga kingi katoa i tetahi taha i tetahi taha ona. Katahi ka whakatika mai ki te whawhai ki te kingi pai nei. Ka tu te whawhai nui ka riro herehere te kingi pai. No te ata po i timata ai te riri a ahiahi noa, ka patai ki tetahi kai mana. Ka maua mai e tetahi hoia he piihi miiti mata. Ka mea te kingi, " Me kai mata ahau i te miiti?" Ka mea atu te hoia, " Kaore; tunua ki te ahi na." Ka maka e te kingi te miiti ki runga ki nga waro, a ka tatari marie ki maoa. Taro iti, ka hongia e tetahi kuri te kakara o te miiti, ka haere ma kapohia iho, a oma ana. Pakiri ana te kata a te kingi. Ka ui atu te hoia ki te take i kata ai te kingi, ka ki atu te kingi, " I ki mai aku pononga ki ahau i te ata nei, e kore e taea e nga kamera e rua te waha i aku kai, i te ahiahi nei ka riro i te kuri iti kotahi te mau."

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

1. What is meant by the complement and what by the supplement of an angle?

Write down the complements of 15° and 150°, and express them in circular measure. Write down the supplements of $\frac{\pi}{4}$ and $\frac{3}{2}\pi$, and express them in degrees. Express in degrees the complement of the angle whose circular measure is 0·35.

2. Find the numerical values of the trigonometrical ratios of 30°.

If tan A = $\frac{1}{2}$, find the values of the other trigonometrical ratios of A.

Show that $\dfrac{\sin \frac{1}{4}\pi - \sin \frac{1}{6}\pi}{\sin \frac{1}{4}\pi + \sin \frac{1}{6}\pi} = (\sec \frac{1}{4}\pi - \tan \frac{1}{4}\pi)^2$.

3. Find an expression for cos (A+B) by a geometrical construction, and hence deduce expressions for sin (A+B) and cos 3A.

4. Prove the following relations :—

(*a.*)　　cos (A+B) . cos (A—B) = cos²A — sin²B

(*b.*)　　1+tan 2A . tan A = sec 2A

(*c.*)　　$\dfrac{\sin^2 A - \sin^2 B}{\sin A . \cos A - \sin B \cos B}$ = tan (A+B).

5. If tan²A — 4 cos³A = 2, find the general value of A.

6. A being an angle of a triangle, find expressions for cos A and cos ½A in terms of the sides. Show, also, that in any triangle—

(*a.*)　　tan B (a — b cos C) = b . sin C

(*b.*)　　cot A . cot B + cot A . cot C + cot B . cot C = 1.

7. Define a logarithm, and prove that log $\frac{a}{b}$ = log a — log b.

Given log 2 = 0·301 and log 3 = 0·477, find log 2·4, log 0·018, L sin 45°, and L tan 60°.

8. An object A is invisible from B; but a surveyor measures a base line BC of 6 chains and finds the angle BCA to be 120°. Going on 10 chains further in the same direction to a point D he finds the angle BDA to be 30°. Determine the distance between A and B.