1900.

NEW ZEALAND.

EDUCATION:

TEACHERS' AND CIVIL SERVICE EXAMINATIONS.

[In continuation of E.-1A, 1899.]

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, 1900.

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 8th and 16th 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 that entered was 1,245, made up as follows: For the Junior Civil Service examination, 490; for the Senior Civil Service examination, 112; for certificate examinations, 632; for drawing (pupil-teachers only), 11.

The expenses of the examinations amounted to £807 10s. 11d., and the fees paid by candidates to £1,014. 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 19th February, the results of the Junior Civil Service examination on the 22nd, and those of the teachers' examinations on the 27th of the same month.

Of the 112 Senior Civil Service candidates, 26 came up to complete examinations in which they had already been partially successful. In all, 48 passed the examination. (See *Gazette*, 1st March, 1900.)

The names of 309 of the Junior Civil Service candidates were published, in the order of marks, in the *Gazette* of the 1st March; and the remaining 181 failed to reach the minimum required, which is one-third of the possible total.

Of the 11 pupil-teachers who availed themselves of the regulation which allows them to come up for one branch of drawing at a time, 7 satisfied the examiner.

At the teachers' examination, 4 were candidates for Class C (University status being taken into account), 203 were candidates for the whole examination for Class D, and 137, having been credited with "partial success" for Class D, came up to complete their examination; 189 were candidates for the whole examination for Class E, and 99 came up to complete the examination for that class. Among these 632 candidates were 172 candidates who had already passed for Class E, and were seeking promotion to Class D; and of the remainder—460 in number—70 were teachers in the service of the Boards, 245 were pupil-teachers, and 57 were normal-school students in training; while 36 were persons who had ceased to be teachers, pupil-teachers, or normal students, and 52 had never sustained any such relation to the public schools.

Of the whole number of 632 candidates, 190 have "passed" (104 for D, and 86 for E), and 146 have achieved "partial success" (79 for D, and 67 for E), while 284 have failed to improve their status. Of the candidates that have achieved "success" or "partial success," 21 had previously failed. As the result of the examination, 148 new certificates will be issued (62 for Class D, and 86 for Class E), and 42 certificates of Class E will be raised to Class D.

1—E. 1A.

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 ...	172	42	...	...	32	...	74
Not passed before—							
Teachers	70	4	14	4	1	3	26
Pupil-teachers ...	246	25	62	5	10	49	151
Normal students ...	57	19	1	2	23	6	51
Retired	36	13	5	1	3*	2	24
Outside candidates...	52	1	4	...	10	7	22
Totals ...	633	104	86	12	79	67	348

* Includes two 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 D1, 72 :—						
Auckland ..	52	13	..	..	10	..
Taranaki ..	2	1	..	..	..	..
Wanganui..	22	6	..	..	5	..
Wellington	23	3	..	..	4	..
Hawke's Bay	7	2	..	..	1	..
Marlborough	2	2	..	..	..	..
Nelson ..	15	4	..	..	6	..
Grey ..	4	2	..	..	1	..
Westland ..	5	..	..	..	1	..
North Canterbury ..	12	2	..	..	1	..
South Canterbury ..	7	2	..	..	1	..
Otago ..	3	1	..	..	..	..
Southland	18	4	..	..	2	..
II. Candidates that have not passed before, 460 :—						
(a.) Teachers—70,—						
Auckland ..	17	2	6	..	..	..
Taranaki ..	2	..	..	..	..	..
Wanganui	7	..	..	2	..	..
Wellington	8	..	1	..	..	..
Hawke's Bay	4	..	..	..	..	..
Marlborough	2	..	..	..	..	1
Nelson ..	8	..	..	1	1	2
Grey ..	4	..	2	..	..	..
Westland ..	2	..	1	..	..	..
North Canterbury ..	7	2	1	..	..	..
South Canterbury ..	3	..	2	..	..	..
Otago ..	1	..	..	..	..	..
Southland	5	..	1	1	..	..
(b.) Pupil-teachers—245,—						
Auckland ..	56	2	17	1	2	12
Taranaki ..	6	2	2	..	1	..
Wanganui	50	3	16	..	1	14
Wellington	40	4	2	2	2	4
Hawke's Bay	19	3	8	..	..	3
Marlborough	4	..	1	..	..	1
Nelson ..	14	1	5	1	1	4
Grey ..	3	..	..	..	..	1
Westland ..	3	..	1	1	..	1
North Canterbury ..	9	2	3	..	2*	2
South Canterbury ..	7	1	..	..	..	4
Otago ..	9	4	1	..	..	1
Southland	25	3	6	..	1	2
(c.) Normal students—57,—						
North Canterbury ..	29	9	1	2	5*	6
Otago ..	28	10	..	..	18†	..
(d.) Candidates that have retired from the service, 36,—						
Taranaki ..	1	..	..	1	..	..
Wanganui	2†	..	..	..	..	..
Wellington	1	..	1	..	..	..
Hawke's Bay	2	..	..	..	1 [C]	..
Marlborough	1	..	..	..	..	..
Westland ..	3	..	..	..	1	..

    * Including one who gains also partial pass for Class E.   † Including one whose work counts for Class C.

—	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 1	..	1	..	..	..
South Canterbury 6	2	..	..	..	2
Otago 18	11	3	..	1 [C]	..
Southland 1	..	..	..	..	..
(e.) Candidates that have not been in the service, 52,— 52					
Auckland 19	..	1	..	2	5
Taranaki 2	..	..	..	1	..
Wellington 5	..	..	..	1	1
Marlborough 1	..	..	..	..	..
Nelson 4	1	..	..	2*	..
Grey 1	..	..	..	..	..
North Canterbury 5	..	2	..	1	1
South Canterbury 1	..	..	..	..	..
Otago 7	..	..	..	3	..
Southland 7	..	1	..	..	..

* Including one who gains also partial pass for Class E.

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.

The following extracts from examiners' reports will probably prove of interest and use to candidates at future examinations:—

" The freehand papers are more satisfactory than is usually the case, and I am glad to report this improvement. The model papers are much as usual, showing for the most part an absolute want of knowledge of even the simplest elementary principles. The geometrical papers are also weak, even the working of the scale problem showed lamentable ignorance upon the part of the candidates generally. Very few perspective papers were attempted." [Examiner in Drawing.]

" Speaking generally, the style of the papers and the methods of working adopted seem to me to have improved, but a number of the candidates still appear to work their sums out first on a separate sheet, and then copy them out to send up, leaving out very often important steps in the process, not infrequently miscopying the figures, besides wasting a great deal of time." [Examiner in Arithmetic, Senior Civil Service and Class D.]

" The tests imposed were of a very simple and straightforward character, and were, in fact, about equal to the standard of a second year pupil-teacher examination in England—certainly not higher. In marking the paper work I made every possible allowance, but the result, on the whole, is very lamentable, and shows how little knowledge many of the candidates have of the right methods of work in this subject, which—even if regarded only from the hygienic standpoint— is of so great value to children. To say, as is sometimes said, that many of the candidates have not the natural qualifications required for teaching school-singing properly is simply begging the question. My own long experience has convinced me that such cases are very rare, and that 90 per cent. of our young teachers might qualify for such an examination with very little trouble, very little loss of time, and with great benefit to themselves and to those whom they are destined to teach." [Examiner in Music.]

I have, &c.,
GEORGE HOGBEN.

EXAMINATION LISTS.

I.—PASSED FOR CLASS D.

Auckland—
Birss, William
Blakey, Frank Ernest
Boswell, James
Carnachan, Robert
Corbett, Robert John
Crawford, Maud Marion
Cumming, Annie Sophia
Downard, Henry John Finch
Fraser, Anne Beatrice
Gillibrand, Emma
Hill, John Hugh
Koller, Frederick Robert
Potter, Ethel May
Robinson, Joshua Edwin
Shroff, Maud Ada
Skelton, Marcus Noble
Vellenoweth, Jessie

Taranaki—
Moore, William Roland
Smith, Fanny Louisa
Taylor, Maud Ruby

Wanganui—
Bates, Frederic Arthur
Gibbs, George Walter
Lyon, William Alexander
Marshall, George Henry
Matheson. Peter
Raikes, Francis Campbell
Slipper, Thomas Benjamin
Stansell, William Frederick
Whalley, George Ethelbert

Wellington—
Bird, Charles
Dallaston, Charles William
Howden, Jessie Edith
Johnston, Margaret Eleanor
Kean, Balfour
Philip, Adeline Elsie
Price, Herbert Edward

Hawke's Bay—
Grant, Milton Reid
McCarthy, Ellen
Morgan, Louisa
Nicholls, Caroline May
Parkinson, Minnie Margaret

Marlborough—
Croucher, Minnie Jane
Stratford, Herbert Addison

Nelson—
Baigent, Gertrude Nicol
Boyce, Charles George Morton
Ellis, Harold Lewis
Riley, Ella Dessiou
Stephen, Mary Winifred
White, Alfred Thomas

Grey—
Harrison, Henry
Skoglund, Wilhelmina Charlotta

North Canterbury—
Blain, Thomas
Campbell, John
Charles, Robert
Denham, Henry George
Hight, Maude Louisa
Hodgson, Ruth Jane
Kiver, Kate Violet
Macintosh, Janet Morton
Maginness, George
Martin, Mary Jane

North Canterbury—*continued*.
Nixon, Caroline
Pavitt, Norman Wilfred
Polson, John Gunn
Rawson, Lilian Rose
Wardle, Charlotte Elizabeth
South Canterbury—
Clarke, Robert Bruce
Irwin, Robert
Smart, Margaret Agnes Lang
Smith, Ellen Catherine
Webber, Jane
Otago—
Barr, Janet Rhoda
Begg, Thomas
Bressey, Florence Fanny
Cameron, Sarah
Clulee, Grace
Cook, William Reginald
Duggan, Patrick Joseph
Eagan, Victoria Helena Winnifred
Enright, Mary Agnes
Ferry, Esther May
Finlayson, Peter Pringle Scott
Greig, Ivy Constance
Hancock, Annie Doidge
Hay, Isabella Currie
Howat, Helen Connell
Hunter, Joseph
Johnston, William Henry
McDonnell, Johanna Margaret
McGregor, Minnie Louise
MacLeod, Margaret
Mechaelis, William Ralph
Mitchell, Clarissa Margarita
Morland, James
Nicoll, Henrietta
Pilkington, Jane
Stables, Robert Hugh
Southland—
Adams, Elizabeth Anne
Browne, Robert Annal Stanley
Cameron, Jessie
Clark, Alexander
Dickie, Agnes
Johnston, Mary Emily
Mitchell, Roberta Christina Flaus

PASSED FOR CLASS E.

Auckland—
Ansley, Arthur Frederick Thomas
Archibald, Margaret Reid
Cardno, Elizabeth
Copeland, Amy Eliza Anne
Findlay, Mary Margaret
Gallie, Ada
Green, Maud Letitia
Hill, Ethel Maud
Hoe, Dolina
Holder, Gertrude Blanche
Hutchinson, Hannah Margaret
Jackson, Albert Edward
Kelly, Ethel Rose Mary
Kendon, Eleanor Grace
Kingsford, Ellen
McAndrew, Ethel Annie
Mackay, Edward Hugh
McRae, Edith Alice
Masson, William
Menzies, Albert Gordon
Piggot, Ellen Mary
Reid, Robert Theodore
Robinson, Florence Katherine
Skelton, Alfred Hall
You, Elizabeth Charlotte
Taranaki—
Bicheno, Leonard
Geldart, Frances Harriet
Hepworth, Ellen
Wanganui—
Anderson, Bonifacius
Anderson, Eleanor Mary
Baker, Sybil Evelina
Black, Elsie Violet
Bourke, Mary
Cleary, Maud
Foster, Robert Francis
Gabites, Frederick George
Gatton, Clara Maude Mary
Gordon, Jane Young
Hunger, Mary Ann
Innes, Edith

Wanganui—*continued*.
Liggins, Charles William
Neilson, Mary
Richardson, Amy Grace
Schlager, Emma
Stevens, Minnie Howard
Watts, Walter James
Wellington—
Clark, William Henry
Cross, Margaret Josephine
McKinnon, Charles James
Townsend, Ethel Marion
Watson, Florence
Willis, Alice Mary
Hawke's Bay—
Head, Clace Elizabeth
Ingleton, Phœbe
Mayo, Ernest
Murray, Elizabeth Hamilton
Olsen, Hilda Antoinette
Rudman, Catherine Emma Brewer
Sargisson, Elizabeth Louise
Tansley, Blanche Erskine Evelyn
Marlborough—
Farmar, Clara Swinbourn
Nelson—
Cresswell, Olive Elizabeth Oceana
Hill, Hollis James
Humphrey, Ernest James
Ladley, Hilda Florence
Malone, Annie Margaret
Sanders, Herbert Basil Score
Scott, Thomas Chapman Campbell
Grey—
Erickson, Jeannette Karoline
Molloy, Jane Anne
Westland—
Greville, Frances Alice May
Jamieson, Amy Frances
Rudkin, George Francis
North Canterbury—
Charles, Elizabeth
Hewitt, Emma Elizabeth
McKee, Sara
McKinnon, Jessie Helen
MacRae, Helen Rebecca
Maxwell, Jane Elizabeth
Offwood, Mabel Emily
Ormandy, Guy Nathan
Wauchop, John Stewart
Wood, Elizabeth Aner
South Canterbury—
McDuff, Ada Maude
Taylor, Violet Amelia
Otago—
Anderson, Lydia
Beckingsale, Lucy
Hartley, Jane Pearson
Pope, Josephine Mary Jessie
Southland—
Brownlie, William
Fairbairn, Elizabeth
Healey, Florence Edith
Kidd, Herbert Howard
Mackenzie, John Alexander
Purvis, Patience Isabella
Southberg, Eleanor
Taylor, Matilda
Wilson, Maud Matilda

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

(University status being taken into
account.)

Hawke's Bay—
Hodge, John McNie
Otago—
Saunders, Elizabeth Wallace
Thomson, William Malcolm

OBTAINED " PARTIAL PASS " FOR
CLASS D.

Auckland—
Caddy, Ethel Barron
Day, Arthur Edward
Elliott, Sydney James
Fenwick, Herbert
Gavey, Rose Langford
Goldsworthy, Elizabeth Mary

Auckland—*continued*.
Hoe, Dolina
Lane, Mary Jane
Long, Albert John
Nutsford, Louisa Margaret
Priestley, Maurice
Ramson, Frederick Stanley
Rudall, John Henry
Vos, Evelyn Constance
Walker, Spenceley
Taranaki—
Biss, Lilian Adeline
Geldart, Frances Harriet
Thomas, Richard Edwin
Wanganui—
Baker, Sybil Evelina
Clayton, John Charles
Fitness, Eva Nellie
Gordon, William Midleton
Hunger, Mary Ann
Lavery, Catherine
Matheson, Roderick
Swinbourn, William Alexander
Wellington—
Arnold, Nellie
Bunting, Nelson D'Arcy
Carter, Elsie
Dempsey, Sidney William
Henderson, George Macdonald
Kelleher, Caroline Helena
McKinnon, Charles James
Williams, Freda
Willis, Alice Mary
Hawke's Bay
Guy, Mary Eveline
Nelson—
Barber, Minnie
Bond, Jane Alice
Cowles, Sarah Alice
Gibbs, Betsey Agathe Hedevig
Gilbert, Esther Ellen
Gilbert, Mabel Clara
Gilbert, Martha Jane
Hill, Hollis James
Marris, Amelia
O'Brien, Maud Montagu
Scott, Thomas Chapman Campbell
Seldon, Edith Jessie
Grey—
Williams, John Frederick
Westland—
Dwyer, Ada Josepha
Jamieson, Amy Frances
MacKinnon, Maude
North Canterbury—
Adams, Elizabeth Maria
Garforth, Frances Hannah
Gates, Thomas Adkisson
MacRae, Helen Rebecca
Maxwell, Jane Elizabeth
Morrow, Fannie Ellingham
Northey, Annie Williams
Parkin, Emily Maude
Porter, Catherine
Sweet, Mildred Thornton
Turnbull, Mary Anna
South Canterbury—
Ziesler, Kaja
Otago—
Alexander, Mary Drysdale
Barr, Beatrice Helen
Brown, Isabel Elizabeth
Brown, Jane Katherine
Chalmers, Ellen Jane
Dale, Sarah
Digby-Smith, Lucy Evelyn
Donald, Annie Howe
Grant, Annie Louisa
Guffie, Selina
Jones, Lilian Frances
Kennedy, Alexander Smillie
McAdam, Charles Campbell
McGregor, Isabella
O'Connell, Catherine
Paterson, Jessie Ramsay Ancell
Roseveare, Charles Joseph
Scott, Jane Clark
Steel, Robina Eliza
Urquhart, Henry Ritchie
Southland—
Fraser, Jeanette
Merrie, Thomas
Poynter, Zoe Esther
Taylor, Matilda

OBTAINED "PARTIAL PASS" FOR CLASS E.

Auckland—
Barlow, Bethia Lucie
Brett, Evelyn Lillian
Caddy, Edward William Barron
Chappell, William Henry
Cummings, Miriam Bridelia
Downard, Frederick Newman Reeve
Gaze, Charlotte de Melber
Gillibrand, Winifred
James, Flora Mary
McCowan, Elizabeth Margaret
Motion, Margaret
Ponsford, Mary Elizabeth
Reid, Harriette
Richardson, Florence Harriett Gertrude
Scott, Winifred
Turnbull, Jacobina Margaret
Wooller, Harold James

Wanganui—
Billens, Mabel Ellis
Blyth, Thomas Arthur
Campbell, Fernly Charlewood
Davy, Eva Mary
Edwards, Ernest
Furrie, Leonard John
Howie, Florence Annie
Lavery, Agnes
Lock, Gertrude Jane
McCaul, Florence May
MeKenna, Lily
McLean, Charles James
Mantle, Alice Mary
Parkes, Grace

Wellington—
Dorset, Olive Mathews
Gallagher, Nellie
Newton, Emma Amelia
Osborn, Isabella Margaret
Skelley, Mary Emma Catherine

Hawke's Bay—
Soundy, Arthur Walden
Tester, Caroline Gertrude
Tucker, Mary Ethel

Marlborough—
Dixon, Annie
Fuller, Violet Ethel

Nelson—
Bisley, Alice Emily
Cameron, Lilly Isabella
Clayden, Eliza Mary
Garth, Isabella Osten
Gibbs, Betsey Agathe Hedevig
Sparrow, Agatha
Taylor, Blanche Isabel

Grey—
Griffiths, Elizabeth

Westland—
Stark, Elizabeth Mary

North Canterbury—
Forbes, Margaret
Hardey, Mary Isabelle
Hickinbottom, Caroline
McLean, Caroline
Mathews, Frederick William
Parkin, Alice Maude
Parkin, Emily Maude
Peppler, Catherine Craig
Porter, Catherine
Rigby, Frances Catherine Jeannette
Simpson, John Hugh

South Canterbury—
Cartwright, James
Hutton, Janet Cunningham
Lawlor, Mary Katherine
Riordan, James Peter Paul
Townsend, Florence
Wharton, Mary

Otago—
Blackie, Walter

Southland—
Boyd, Annie Spencer
Gifford, Mary Ann

III.—PRIZES.

Experimental Science—
Finlayson, Peter Pringle Scott, Otago
Taylor, Maud Ruby, Taranaki
Thomson, William Malcolm, Otago } Equa
Drawing—
Seagar, Edith, Wellington, first prize
Kendon, Eleanor Grace, Auckland, second prize
Price, Herbert Edward, Wellington, third prize

IV.—SPECIAL MENTION.

Class D.

English—
Rawson, Lilian Rose, North Canterbury
Stephen, Mary Winifred, Nelson
Arithmetic—
Boyce, Charles George Morton, Nelson
Gibbs, George Walter, Wanganui
Lyon, William Alexander, Wanganui
Rawson, Lilian Rose, North Canterbury
Riley, Ella Dessiou, Nelson
Slipper, Thomas Benjamin, Wanganui
Geography—
Ellis, Harold Lewis, Nelson
McLean, Caroline, North Canterbury
Peart, Frederick Blenkiron, Nelson
Rawson, Lilian Rose, North Canterbury
History—
Barr, Beatrice Helen, Otago
Clarke, Robert Bruce, South Canterbury
Long, Albert John, Auckland
Rawson, Lilian Rose, North Canterbury
Taylor, Maud Ruby, Taranaki
Experimental Science—
Finlayson, Peter Pringle Scott, Otago
Marshall, George Henry, Wanganui
Taylor, Maud Ruby, Taranaki
Thomson, William Malcolm, Otago
Urquhart, Henry Ritchie, Otago
Agriculture—
Carnachan, Robert, Auckland
Power, Edward Arthur, Auckland
Latin—
Barr, Beatrice Helen, Auckland
Rawson, Lilian Rose, North Canterbury
French—
Biss, Lilian Adeline, Taranaki
Downard, Henry John Finch, Auckland
German—
Barber, Minnie, Nelson
Algebra—
Denham, Henry George, North Canterbury
Nutsford, Louisa Margaret, Auckland
Euclid—
Denham, George Henry, North Canterbury
Biology—
Rudall, John Henry, Auckland
Taylor, Maud Ruby, Taranaki

Class E.

English—
Marshall, George Henry, Wanganui
Neilson, Mary, Wanganui
Arithmetic—
Brownlie, William, Southland
Gates, Thomas Adkisson, North Canterbury
Greville, Frances Alice May, Westland
Hardey, Mary Isabelle, North Canterbury
Peppler, Catherine Craig, North Canterbury

Arithmetic—continued.
Rigby, Frances Catherine Jeannette, North Canterbury
Simpson, John Hugh, North Canterbury
Watts, Walter James, Wanganui
Geography—
Brownlie, William, Southland
Hodgson, Ruth Jane, North Canterbury
Wauchop, John Stewart, North Canterbury
History—
Brownlie, William, Southland
Hodgson, Ruth Jane, North Canterbury
Ponsford, Mary Elizabeth, Auckland
Elementary Science—
Brownlie, William, Southland
Neilson, Mary, Wanganui
Wooller, Harold James, Auckland
Agriculture—
Menzies, Albert Gordon, Auckland
Sanders, Herbert Basil Score, Nelson
Wauchop, John Stewart, North Canterbury
Domestic Economy—
Davy, Eva Mary, Wanganui
Ingleton, Phœbe, Hawke's Bay
Lavery, Agnes, Wanganui
McKee, Sara, North Canterbury
Mead, Hilda, Taranaki

Classes D and E.

School Management—
Adams, Elizabeth Maria, North Canterbury
Anderson, Lydia, Otago
Beckingsale, Lucy, Otago
Ferry, Esther May, Otago
Grant, Milton Reid, Hawke's Bay
Hewitt, Emma Elizabeth, North Canterbury
Kiver, Kate Violet, North Canterbury
Mossman, Leila Lucy, Wanganui
Polson, John Gunn, North Canterbury
Sweet, Mildred Thornton, North Canterbury
Music—
Barr, Janet Rhoda, Otago
Finlayson, Peter Pringle Scott, Otago
Grant, Annie Louisa, Otago
Hancock, Annie Doidge, Otago
Hutton, Janet Cunningham, South Canterbury
Morgan, Louisa, Hawke's Bay
Offwood, Mabel Emily, North Canterbury
Price, Herbert Edward, Wellington
Roseveare, Charles Joseph, Otago
Drawing—
Brownlie, William, Southland, geometrical
Caddy, Edward William Barron, Auckland, model
Edwards, Ernest, Wanganui, freehand
Fuller, Violet Ethel, Marlborough, freehand
Galloway, Agnes Josephine, Otago, freehand
Guffie, Selina, Otago, freehand
Kendon, Eleanor Grace, Auckland, freehand and model
Kidd, Herbert Howard, Southland, geometrical
Lane, Bertha Louisa, Auckland, model
Mackenzie, John Alexander, Southland, geometrical
Menzies, Albert Gordon, Auckland, freehand
Ponsford, Mary Elizabeth, Auckland, freehand
Porter, Sarita Mabel, Auckland, model
Seagar, Edith, Wellington, perspective

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.]

SECTION I.

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

(a.) For a country school : Standards I. to VI. and a Primer class ; staff,—master and a second-year pupil-teacher (female).

(b.) For the upper division of a boys' school : Standards IV. to VI. and Class X.— main room and one class-room ; staff,—master and first- and third-year pupil-teachers (males).

SECTION II.

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 state class for which lesson is designed, time allowed for it, and apparatus required :—

(a.) A local industry.

(b.) First lesson on decimal fractions.

(c.) Leaves of plants.

(d.) Patriotism.

(e.) Volcanic phenomena of New Zealand.

(f.) The air has weight.

SECTION III.

A school is opened four weeks before the end of the quarter. The sheet attached is a copy of its daily attendance register for that time. Complete the required totals and averages, and enter them in their proper places. Hand in the sheet as an answer to Section III.

SECTION IV.

1. What faults are to be avoided in teaching by question and answer? How would you apply the method of instructive questioning in teaching the meaning of an abstract word—say, "imperialism"—or in a lesson to young children on "cleanliness"?

2. What parts do instruction, imitation, and practice respectively play in producing good reading? What defects in purity of enunciation have you noticed amongst your pupils? How have you dealt with them?

3. What use would you make of the blackboard in (1) a first lesson on the analysis of a simple sentence, and (2) in a lesson on the Transvaal war?

SECTION V.

1. "All lessons need preparation." Discuss this statement.

2. How may the memory of children be cultivated and strengthened?

3. Discuss the following statement : "The teacher's part in the process of instruction is that of a guide, director, or superintendent of the operation by which the pupil teaches himself."

SECTION VI.

1. What practical difficulties in maintaining discipline and attention may arise from faults of construction in the school building and in the arrangement of school furniture? Especially note the effects of bad ventilation and bad lighting.

2. What general principles should guide a teacher in the infliction of punishment? What forms of punishment should be invariably avoided? How would you, with a view to permanent reform, proceed to deal with a child habitually untruthful?

3. What do you understand by training the senses? How is it provided for in the Course of Instruction in Public Schools? What further steps would you take to improve the perceptive faculties of your pupils?

PART OF SECTION III. OF SCHOOL MANAGEMENT PAPER, 1900.

Year 189____ . Quarter ending ____

No.	Admission No.	Name.	Age.			Time since Admission.			Standard last passed.	First Week. ____ to ____					Second Week. ____ to ____					Third Week. ____ to ____					Fourth Week. ____ to ____					No.	Times Present. 1st Week.	2nd "	3rd "	4th "	Total for Period.	Remarks.
			Y.	M.		Y.	M.			M.	T.	W.	TH.	F.	M.	T.	W.	TH.	F.	M.	T.	W.	TH.	F.	M.	T.	W.	TH.	F.							
1		A. B.								×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	1						
2		C. D.								×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	2						
3		E. F.								×	✓	×	×	✓	×	×	×	×	✓	×	×	×	×	×	×	×	✓	×	×	✓	3						
4		G. H.								×	×	×	×	×	×	×	×	×	×	×	×	×	×	✓	×	×	×	×	×	4						
5		I. K.								×	×	×	×	×	×	×	×	×	✓	×	×	×	×	×	×	×	×	×	×	5						
6		I. L.								×	×	×	×	×	✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	6						
7		M. N.								×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	7						
8		O. P.								×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	8						
9		Q. R.										×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	9						
10		S. T.										×	×	×	×	×	×	✓	×	×	×	×	×	✓	×	×	×	×	×	10						
11		U. V.												×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	11						
12		W. R.												×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	12						
13		H. T.								×	✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	13						
14		D. S.								×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	14						
15		P. L.								×	✓	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	15						
16																														16						
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Holiday.

Left.

Number of Attendances ... { Morning ... / Afternoon ... }

Total Attendances ...

Number of Times the School has been open ...

Average Attendance ...

Weekly Roll Number ...

For Working Average enter (below) the numbers for the Quarter, omitting half-days on which the attendance was less than half the roll number.

Attendances—

Times—

Working Average }

Average Roll—

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

1. How would you arrange an experiment to show to a large class that in the case of two parallel forces acting upon a lever and producing equilibrium the pressure upon the fulcrum is equal to the algebraical sum of the two forces ?

2. Explain in detail how you would determine the specific gravity (*a*) of cork, (*b*) of sand.

3. What do you understand by mechanical work ?   How would you prove in the case of any one of the mechanical powers that no more work is obtained from the machine than is put into it ?

4. What reason have you for thinking that light and sound travel at different speeds ?   How has the velocity of sound in air and in water been determined ?

5. Draw a diagram representing the real and apparent path of a pencil of rays from a luminous point below water to an observer's eye above water.

6. Describe experiments to show (*a*) that equal weights of water and mercury give out different quantities of heat in cooling through the same range of temperature ; (*b*) that more heat is required to melt an ounce of ice without changing its temperature than to raise the temperature of one pound of cold water five degrees Fahrenheit.

7. Explain what is meant by *conduction, convection,* and *radiation* of heat, and mention any practical uses of convection currents.

8. How would you prepare strong alcohol from beer ?   Explain the *rationale* of the process.

9. What experiments could you arrange to show the properties of a thin wire through which an electric current is passing ?

10. How would you fill a jar with chlorine and another with hydrochloric acid?   What experiments would you make to show the difference between the two gases ?

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

1. What is meant by energy ?   Distinguish between kinetic energy and potential energy. Give examples.

2. Define as fully as possible the terms *malleability, ductility, elasticity, diffusion,* and *viscidity.*

3. Describe a system of pulleys, and explain its action.

4. What is the velocity of sound in air, how has it been determined, and how is it influenced by temperature ?

5. State the laws which govern the reflection and refraction of light, illustrating your answer by diagrams.

6. Explain, with examples, what is meant by latent heat.

7. Describe experiments to show the operation of magnetism.

8. Give examples showing how chemical decomposition may be effected by electricity.

9. Name the compounds formed by burning sulphur, phosphorus, carbon, iron, and magnesium in oxygen, and state the properties of these compounds.

10. Name the principal constituents of food, and state the chemical changes which take place during the passage of the food through the body.

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

1. Name the more important impurities which may exist in water.   Which of these impurities would you specially guard against in selecting water for drinking and washing purposes respectively, and why ?

2. Briefly describe the constituents of milk.   Why is milk considered a perfect food ?

3. State what is the normal temperature of the body, how it is maintained, and what are the chief causes of loss of heat.

4. Give a short description of the digestive organs, and state the chemical changes produced in the several constituents of food in passing through the body.

5. Describe the structure and action of the skin.   Why is personal cleanliness so essential to good health ?

6. Explain why brown bread is more nutritious than white.   What takes place when bread is made into toast ?

7. Describe how you would cook (*a*) a piece of corned beef, and (*b*) a sirloin of beef, giving reasons for each step in the process.

8. What takes place when a potato is boiled ?   What advantage is gained when it is boiled in its skin ?

9. What precautions would you take in the case of an infectious disease breaking out in a dwelling ?

10. Why is flannel generally superior to linen, cotton, and silk as an article of clothing ?

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

[Illustrate your answers with diagrams where possible.]

1. Describe the different parts of such a flower as wallflower.   Describe the process of fertilisation from the time when the pollen reaches the pistil.

2. Write a short description of the chief constituents of plants.

3. In what forms do the following constituents occur in soils : Lime, potash, silica, nitrogen, and phosphoric acid ?

4. Write an account of the chemical changes produced in nitrification, and state the conditions necessary.

5. Why should light soils not be exposed to a bare fallow ?

6. How is superphosphate of lime prepared ? State what chemical changes take place during the process.

7. To what crops would you apply the following manures, and how : Nitrate of soda, super-phosphate of lime, and kainit ?

8. How are soils improved by drainage ?

9. How does a cereal crop differ from a root-crop in its effect on the soil, and in the way in which animal food is stored ?

10. How would you demonstrate to a class the following :—

(a.) That the terms " light " and " heavy " soils do not refer to their actual weight.

(b.) That soils contain carbon, iron, and silica.

(c.) The process of osmosis.

(d.) Germination.

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

[Illustrate your answers with diagrams where possible.]

1. Describe and give examples of different kinds of roots.

2. Write what you know of the assimilation of carbon by plants, and state the conditions necessary.

3. How are soils formed ?   What conditions determine the different kinds of soil ?

4. What do you understand by the exhaustion of soils, and by the term *available* as applied to soil constituents ?

5. Describe the effects produced on soils by tillage.

6. How should farmyard manure be treated in order to prevent loss ?

7. State the advantages gained by rotation of crops.

8. Write what you know of the wheat-plant and of its cultivation.

9. Name the compounds of lime you are acquainted with, stating the uses to which they may be applied in agriculture.

10. Give the life-history of some insect harmful to plants, and state the means you would adopt to exterminate it.

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

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

I. (a.) Express the meaning of the following words by equivalent words or phrases of Anglo-Saxon origin : condone, apparatus, eliminate, implicit, mutual, interstices, alternative, antagonist, decimate, retrocession.

(b.) Comment on the italicized words in the following expressions :—

(1.) I am myself *indifferent* honest.

(2.) Without *let* or hindrance.

(3.) In good *sooth.*

(4.) Woe *worth* the *chase*, woe worth the day.

(5.) *Him listed ease* his battle *steed.*

II. (a.) Explain the function of the verb *have* and show its force in the following sentences :—

(1.) I have a letter.

(2.) I have written a letter.

(3.) My letter has to go to-day.

(4.) My letter has gone.

(5.) I have come to post it.

(b.) Parse *what* in the sentences—

(1.) I will tell you what.

(2.) He was somewhat late.

(3.) What o'clock is it ?

(4.) What man is this ?

(5.) What with the wind and the rain, it was not easy to get on.

III. In the following passages there are inaccuracies or inelegancies of expression. Rewrite each passage.   Explain clearly the principles violated, and give rules for avoiding similar errors :—

(1.) The first railway was called " the Rocket." The rate of its speed was not very great, but has increased very much during the lapse of years.

(2.) The progress made in the use of steam and the invention of the railway are therefore most wonderful, and it is surprising to think how the people in former times progressed without the wonderful inventions of later years.

(3.) The number of inventions in this century are too numerous to mention, but some of them are as follows : The electric telegraph, the telephone, the phonograph, and others.

(4.) We have become not only a better and wiser but also a richer nation.

(5.) " You have so imperceptibly got accustomed to this electrical atmosphere that your limbs have become unconsciously inured to the altered conditions and have not apprised you of the change."

(6.) The Duke of Newcastle thought only of managing the bribe system properly which Pitt scorned and devised plans for the material and moral good of the nation.

2—E. 1ᴀ,

(7.) They have at least as much right, and very much more so, to be described as any other savages.

(8.) Supplying 5,000 gallons a week is a sufficient proof of our success.

(9.) He is a good deal older than what I am.

(10.) Puritanism preferred preaching than the lengthy prayers which mainly constructed the English religion of that time.

IV. Express in simple and direct language the meaning of the following passages. Illustrate by comparison between your version and the original the essential differences between prose and poetry :—

(1.) Then all things look strange in the pure golden aether;
We walk through the gardens with hands linked together,
And the lilies look large as the trees;
And as loud as the birds sing the bloom-loving bees,
And the birds sing like angels, so mystical, fine,
And the cedars are brushing the archangel's feet,
And time is eternity, love is divine,
And the world is complete.
Now God bless the child,—father, mother, respond !
            O Life, O Beyond,
Thou art strange, thou art sweet.
                            —*Mrs. Browning.*

(2.)   I bind the sun's throne with the burning zone,
And the moon's with a girdle of pearl ;
The volcanoes are dim, and the stars reel and swim,
When the whirlwinds my banner unfurl.
From cape to cape, with a bridge-like shape,
Over a torrent sea,
Sunbeam proof, I hang like a roof,
The mountains its columns be.
The triumphal arch through which I march
With hurricane, fire, and snow,
When the powers of the air are chained to my chair,
Is the million-coloured bow ;
The sphere-fire above its soft colours wove,
While the moist earth was laughing below.
                            —*Shelley.*

V. Write down some general rules to be observed in composing an essay.

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

(1.) The War in the Transvaal.
(2.) Should New Zealand join the Australian Federation ?
(3.) The Study of Childhood.
(4.) The Influences of School Life.

VII. Punctuate the following passage, putting capitals where required :—

In general it was a well-approved match some might think him and some her the most in luck but yet upon the whole there was no serious objection raised except in one habitation the vicarage mr elton cared little about it he only hoped the young ladys pride would now be contented and on the point of living at hartfield could daringly exclaim rather he than I but mrs elton was very much discomposed indeed poor knightley poor fellow sad business for him how could he be so taken in poor knightley there would be an end of all pleasant intercourse with him how happy he had been to come and dine with them whenever they asked him but that would be all over now no more exploring parties made to donwell for her oh no there would be a mrs knightley to throw cold water on everything extremely disagreeable but she was not at all sorry that she had abused the housekeeper the other day shocking plan living together she knew a family near maple grove who had tried it and been obliged to separate before the end of the first quarter.—*Jane Austen.*

VIII. Spell the words dictated by the Supervisor.

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 :—

Focussed, recrudescence, inoculate, congeries, ceramic, archaeology, tiros, anthropomorphic, farrago, innuendo, cenotaph, sirdar, corvette, immutable, assimilating, sacrilegious, crustacean, horizontally, siphon, mandibles.

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. Mention, with examples, the different ways in which English nouns form their plurals. Give instances (1) of double plurals, (2) of plurals used as singulars, (3) of plurals in appearance only, (4) of nouns used only in the plural, and (5) of plurals of compound nouns.

2. Show, by giving a few examples, that the proper *placing* of adverbs is of great importance in English composition.

3. Certain parts of the verb may be used substantively, and certain parts adjectively. Explain and illustrate this statement.

4. Rewrite the following sentences in correct English :—

(1.) Born at Huntly, in Aberdeenshire, his books all bear a deeply religious stamp.

(2.) All who live must die.

(3.) The abolition of the income-tax more than condones for the turmoil of a general election.

(4.) What is the use of you talking like that ?

(5.) It would have puzzled him to make good the assertion, if its veracity had been tested by the actual condition of the people.

5. Combine the following sentences into one sentence :—

Sir Philip Sidney was wounded.

He was at a battle.

It took place near Zutphen.

The wound was inflicted by a musket-ball.

It broke the bone of his thigh.

This led to his death.

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

I was a *stricken* deer *that* left the herd
Long since ; with *many* an arrow *deep* infixed
My panting side was charged, when I withdrew
To seek a tranquil death in distant shades.
There was I found by One who had Himself
Been hurt by the archers. In His side He bore,
And in His hands and feet, the cruel scars,
With gentle force *soliciting* the darts,
He drew them *forth*, and healed and *bade* me *live*.

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

(1.) Patriotism.

(2.) A Garden in Spring.

(3.) The War in South Africa.

8. Punctuate the following passage, and put capitals where they are required : while johnson was busied with his idlers his mother who had accomplished her ninetieth year died at lichfield it was long since he had seen her but he had not failed to contribute largely out of his small means to her comfort in order to defray the charges of her funeral and to pay some debts which she had left he wrote a little book in a single week and sent off the sheets to the press without reading them over a hundred pounds were paid him for the copyright and the purchasers had great cause to be pleased with their bargain for the book was rasselas.

[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 with regard to questions 8 and 9.

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

Feasible, posthumous, voracity, amicable, calumny, parallelism, hypercritical, ingenuous, quotient, siege, bouquet, novice, sententious, meagre, innocuous, piquant, commodious, irretrievable, antarctic, vivisection.

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

I. Improve the following sentences, giving reasons for any changes you make :—

(1.) It would have only had to be explained to have been ignominiously rejected.

(2.) The death of Pooley, the cricketer, is contradicted.

(3.) It is resolved by the Board that students of two years' standing will be admitted.

(4.) Nobody describes so graphically as Kipling.

(5.) Their peculiar haunt, it is said, are the deep gorges of the mountains.

(6.) You may give it to whoever you please.

(7.) I am one of those who cannot describe what I do not see.

(8.) For his part he cared little for these sort of amusements.

(9.) Perhaps everybody present except he guessed why.

(10.) And many a holy text around she strews
That teach the rustic moralist to die.

II. Distinguish between direct and indirect quotation. State when the direct form is preferable, and when the indirect. Give examples.

III. What is meant by style ? Illustrate your answer by reference to the following extracts from Burke, Goldsmith, and Dr. Johnson :—

"If the King and Queen of France were to fall into our hands by the chance of war, they would be treated with another sort of triumphal entry into London. We formerly have had a King of France in that situation ; you have read how he was treated by the victor in the field, and in what manner he was afterwards treated in England. Four hundred years have gone over us, but I believe we are not materially changed since that period. Thanks to our sullen resistance to innovation, thanks to the cold sluggishness of our national character, we still bear the stamp of our forefathers. We have not, as I conceive, lost the generosity and dignity of thinking of the fourteenth century ; nor as yet have we subtilized ourselves into savages. We are not the converts of Rousseau ; we are not the disciples of Voltaire; Helvetius has made no progress amongst us. Atheists are not our preachers; madmen are not our law-givers. We think that we have made no discoveries, and we think that no discoveries are to be made in morality ; nor many in the great principles of government, nor in the ideas of liberty which were understood long before we were born, altogether as well as they will be after the grave has heaped its mould upon our presumption, and the silent tomb shall have imposed its law upon our pert loquacity."

(Reflections on the French Revolution.)

(2.) "When we were returned home the night was dedicated to schemes of future conquest. Deborah exerted much sagacity in conjecturing which of the two girls was likely to have the best place and most opportunity for seeing good company. ' Well, faith, my dear Charles, between ourselves, I think we have made an excellent day's work of it.' ' Pretty well,' cried I, not knowing what to say. ' What; only pretty well !' returned she. ' I think it is very well. Suppose the girls should come to make acquaintances of taste in town ! This I am assured of : that London is the only place in the world for husbands. Besides, my dear, stranger things happen every day; and, as ladies of quality are so taken with my daughters, what will not men of quality be ? *Entre nous,* I protest I like my Lady Blarney vastly ; so very obliging. However, Miss Carolina Wilhelmina Amelia Skeggs has my warm heart. But yet when they came to talk of places in town you saw at once how I nailed them. Tell me, my dear, don't you think I did for my children there ? ' ' Ay,' returned I, not knowing what to think of the matter, ' Heaven grant they may be both the better for it this day three months ! ' This was one of the observations I made to impress my wife with an opinion of my sagacity, for if the girls succeeded then it was a pious wish fulfilled, but if anything unfortunate ensued, then it might be looked upon as a prophecy."

(Vicar of Wakefield.)

(3.) Some, however, there are whom the intrusion of scruples, the recollection of better notions, or the latent reprehension of good examples will not suffer to live entirely contented with their own conduct ; those are forced to pacify the mutiny of reason with fair promises and quiet their thoughts with designs of calling all their actions to review, and planning a new scheme for the time to come. *(The Idler.)*

IV. Write an essay on "The Julius Cæsar of Shakespere's Play."

V. 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.]

VI. 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.)

Hon. Sir T. McIlwraith to His Excellency Sir H. W. Norman, G.C.B.

Sir,—   Chief Secretary's Office, Brisbane, 29th June, 1893.

Referring to the report of the Postal and Telegraph Conference held in Brisbane in March last, of which I had the honour to enclose your Excellency a copy, I have now the honour to request that your Excellency will be good enough to communicate to the Secretary of State for the Colonies the following resolutions which were adopted by the Conference :—

"That, in view of the necessity of speedy and regular communication between the United Kingdom and Australasia, this Conference is of opinion that the system of subsidies should be continued, and the mail service maintained by the United Kingdom and the colonies as at present.

"That the London Post Office be invited to call for tenders in Great Britain and Australasia for a weekly service, on conditions approved by the colonies, from *bonâ fide* British companies. Before any tenders are accepted, it will be a request that they be submitted to the colonies for approval.

"That this Conference considers it desirable to negotiate for a Canadian Pacific postal service.

"That, in the opinion of this Conference, the time has arrived when a second cable route should be established *viâ* the Pacific to Vancouver, touching at such places *en route* as may be afterwards agreed upon."   I have, &c.,

His Excellency Sir Henry W. Norman, G.C.B.   Thos. McIlwraith.

(No. 2.)

The Hon. Sir T. McIlwraith, Brisbane, to the Hon. the Postmaster-General,
Washington.

Sir,—   Chief Secretary's Office, Brisbane, 3rd July, 1893.

I have the honour to inform you that a Postal and Telegraph Conference of representatives of all the Australasian Colonies was held in this town in March last, and I have been requested to communicate to you the following resolution which was adopted by the Conference, relating to the mail service between Australia and San Francisco :—

"That this Conference directs that a communication be sent to the Postmaster-General, Washington, regretting the continued non-participation of the United States in the matter of the subsidy to the present San Francisco mail service, and also directs his attention to the excessive overland transit rates between San Francisco and New York, and respectfully requests him to urge the Pacific Railway Company to give more favourable terms."

With regard to this resolution, I take the liberty of calling attention to the fact that the overland transit rates between San Francisco and New York amount to over 70 per cent. of the total postage of letters carried by the line in question.

                                                              I have, &c.,
The Hon. the Postmaster-General, Washington.   Thomas McIlwraith.

(No. 3.)

The Superintendent of Foreign Mails, Washington, to the Hon. the Postmaster-
General, Brisbane.

                                       Post Office Department, Office of Foreign Mails,
Sir,—   Washington, 10th August, 1893.

I have the honour, by direction of the Postmaster-General, to acknowledge receipt of your letter of the 3rd ultimo, communicating, by direction of the Postal and Telegraph Conference held in Brisbane in March last, a resolution adopted by the Conference regretting the non-participation of this Department in the matter of the subsidy to the present San Francisco mail service, and calling attention to the excessive overland transit rates between San Francisco and New York. In reply, I have to inform you that the amount now paid by this Department for the sea conveyance of mails from San Francisco to the Australian Colonies is the maximum sum allowable under the statutes now in force in this country, and that the rate for the transportation of closed mails between San Francisco and New York is less than the actual cost of the transit in question.

The questions covered by the resolution adopted by the Conference have already received the very careful consideration of this Department, and it has been found impracticable at this time to change existing conditions.   I am, &c.,
                                                              A. M. Brooks,
The Postmaster-General, Brisbane.   Superintendent of Foreign Mails.

(No. 4.)

The Superintendent of Foreign Mails to the Hon. the Postmaster-General,
Queensland.

                                       Post Office Department, Office of Foreign Mails,
Sir,—   Washington, 18th August, 1893.

I have the honour, by direction of the Postmaster-General, to acknowledge the receipt of your letter of the 12th ultimo, transmitting a copy of a communication embodying a resolution relative to the establishment of the parcels-post service between Australia and the United States, which was adopted at the Post and Telegraph Conference held at Brisbane in March last. In reply, I am directed to request that you will be so good as to inform the postal administrations of the colonies referred to that it is not deemed advisable by this Department to establish the service in question at this time. The matter will not be lost sight of, however, and as soon as the inauguration of the service appears to be practicable the administrations interested will be promptly advised.   I am, &c.,
                                                              A. M. Brooks,
The Postmaster-General, Queensland.   Superintendent of Foreign Mails.

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

I. Explain the following references :—

(1.) That tremendous storm, that " which of late o'er pale Britannia past."

(2.) The next minute the necklace was where Belinda's cross is in Mr. Pope's admirable poem.

(3.) We read in Shakspere (whom the writer for his part considers to be far beyond Mr. Congreve, Mr. Dryden, or any of the wits of the present period) that when jealousy is once declared nor poppy nor mandragora nor all the drowsy syrup of the East will ever soothe or medicine it away.

(4.) " The Hind and the Panther shall run in the same car."

(5.) " But Dulcinia del Toboso is peerless. Well, go and attack windmills."

(6.) I have known a woman preach Jesuit's bark and afterwards Dr. Berkeley's tar-water.

(7.) O dea certe !

(8.) Grub Street scribblers.

(9.) " I did not see the lovely Beatrix—sure her namesake of Florence was never half so beautiful."

(10.) A lonely fallen Prometheus groaning as the vulture tears him.

II. Criticize Thackeray's description of (1) Marlborough, (2) Swift, and (3) Steele.

III. Write in modern English prose a concise version of the following speech :—

> *Brutus.* No, not an oath : if not the face of men,
> The sufferance of our souls, the time's abuse,—
> If these be motives weak, break off betimes,
> And every man hence to his idle bed ;
> So let high-sighted tyranny range on,
> Till each man drop by lottery. But if these,
> As I am sure they do, bear fire enough
> To kindle cowards, and to steel with valour
> The melting spirits of women ; then, countrymen,
> What need we any spur, but our own cause,
> To prick us to redress? what other bond,
> Than secret Romans, that have spoke the word,
> And will not palter ? and what other oath,
> Than honesty to honesty engaged,
> That this shall be, or we will fall for it ?
> Swear priests, and cowards, and men cautelous,
> Old feeble carrions, and such suffering souls
> That welcome wrongs ; unto bad causes swear
> Such creatures as men doubt : but do not stain
> The even virtue of our enterprise,
> Nor the insuppressive mettle of our spirits,
> To think, that, or our cause, or our performance,
> Did need an oath.

IV. Name the authors of *any five* of the following, and state where they occur :—

(1.) There is a tide in the affairs of men which, taken at the flood, leads on to fortune.

(2.) Fools who came to scoff remained to pray.

(3.) The sports of children satisfy the child.

(4.) He left a name at which the world grew pale,
To point a moral or adorn a tale.

(5.) Where ignorance is bliss
'Tis folly to be wise.

(6.) Pleasures are like poppies spread,
You seize the flower, its bloom is shed ;
Or like the snowflake in the river,
One moment white, then melts for ever.

(7.) The rank is but the guinea stamp,
The man's the gold for a' that.

(8.) He prayeth best who loveth best
All things, both great and small ;
For the dear Lord who loveth us,
He made and loveth all.

(9.) " Headstrong as an allegory on the banks of the Nile."

(10.) Oh, for a lodge in some vast wilderness,
Some boundless contiguity of shade,
Where rumours of oppression and deceit,
Of unsuccessful or successful war
May never reach me more.

V. Give an account of any two of the following works : Macpherson's " Ossian," Chatterton's Poems, " The Wealth of Nations," "An Inquiry concerning Human Understanding," " The School for Scandal," " The Task," " Christabel," " The Natural History of Selborne."

VI. Describe the development of the modern novel during the period set, 1744–1800.

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

1. Thirteen planks are laid side by side on the ground ; twelve are then laid across them, and so on—successive layers of 13 and 12 planks—to 85 layers : how many planks does the stack contain ?

2. How many £20 shares must be sold at a discount of 5 per cent. to pay a bill of £1,458 5s. due seven months hence at 4 per cent. per annum ? (Reckon the bill at its theoretical present worth.)

3. In what proportions must three different qualities of sugar, at $3\frac{1}{4}$d., 4d., and $4\frac{1}{2}$d. a pound respectively, be mixed so that the cost of the mixture may be $4\frac{1}{4}$d. a pound ?

4. From what quantity must $\frac{11}{75}$ be subtracted that the result added to $3\frac{3}{5} + 4\frac{4}{5}$ of

$$\frac{5\frac{1}{6}}{7\frac{1}{8} - 6\frac{1}{7}} - \frac{9}{10\frac{10}{11}} \div \frac{3}{4} \text{ may be equal to } 26 ?$$

5. If a cubic foot of marble weighs 2·716 times as much as a cubic foot of water, find the weight of a block of marble 6 ft. 4 in. long, 1 ft. 6 in. broad, and 1 ft. thick, having given that a cubic foot of water weighs 1,000 oz.

6. Find the sum, difference, product, and two quotients of 10·01 and 0·0091, and the sum of the five results.

7. A merchant fails for £7,852 16s., and pays a first dividend of 11s. 8d. in the pound, and afterwards a second dividend of 8s. 9d. in the pound on what was then due : find what his estate realised, and how much in the pound he paid altogether.

8. What distance will a train travel in 3 hours 39 minutes 22 seconds at a speed of 49 miles 7 furlongs 52 yards an hour ?

9. A person bought railway stock at 88¾, and, after receiving a half-year's dividend at the rate of 4½ per cent. per annum, sold out at 93⅝, and made a profit of £142 10s. : how much stock did he buy ?

10. A farmer bought 749 sheep, and sold 700 of them for the price he paid for the whole, and afterwards sold the remainder at the same price a head as the others : find the gain per cent.

11. The capacity of a cistern is the sum of two cubes whose edges are 10 in. and 2 in. respectively, and the area of its base is the difference of two squares whose sides are 1⅑ ft. and 1⅔ ft. respectively : find its depth.

12. The capital of a company is £64,875, and the profits of the year amount to £5,143 11s. : find to the nearest quarter the highest dividend that can be paid, and how much will be carried forward.

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

1. (*a.*) Multiply 54·87797 by 1·52332.
    (*b.*) Divide 4·318234 by 9·019582.
    (*c.*) Find the L.C.M. of 19½, 19⅚, and 21¼.
In (*a*) and (*b*) give the result correct to three places of decimals.

2. There are three railway lines each one mile long : one rises 1 ft. 9 in. for every 100 ft. of line ; another rises 1 ft. in every 53 ft. of line ; and the third rises 106 ft. in the mile : which line is the steepest, and how much does each line rise in a distance of 76 chains 24 links ?

3. A gallon of water weighs 10 lb. avoirdupois, and a cubic foot of water weighs 62·355 lb. Find correctly to two places of decimals the number of cubic inches in a gallon.

4. The sides of a rectangular plot of grass are 125 ft. and 65 ft. 6 in. : find its area in square feet, and find the length of the side of a square of equal area.

5. If £1 = 4·86 dollars, find the price in English money of 78 cwt. 3 qr. 12 lb. at 15 dollars 20 cents a hundredweight.

6. The driving wheel of a locomotive is 44 in. in diameter : how many times will the wheel revolve while the locomotive travels ten miles ? [*Note.*—The circumference of a circle may be taken as 3·1416 times the diameter.]

7. A bankrupt's debts amount to £3,549, and he is expected to pay 12s. 6d. in the pound. If it is found that his assets have been overestimated by £133 1s. 9d., how much in the pound can he actually pay ?

8. What sum would amount to £1,405 19s. in three years at compound interest if the rate is 3 per cent. per annum for the first year, 4 per cent. per annum for the second year, and 5 per cent. for the third year ?

9. The Post Office Savings Bank allows interest at 3 per cent. per annum on money deposited for each complete month the money is in the bank. A depositor opens an account in January, 1898, by paying in £5 on the 31st January, and he pays in £5 on the last day of each month of the year : find the interest due to him on the 1st January, 1899.

10. What sum of money must be invested in the 3-per-cents at 102 to secure an income of £940 clear of income-tax at 5d. in the pound ?

11. A manufacturer ships a crate 10 ft. 2 in. long, 7 ft. 9 in. wide, and 5 ft. 5 in. high : give the dimensions in centimetres, and find how many cubic metres the crate contains. [*Note.*— 1 inch = 2·54 centimetres.]

12. Gold is sold to the mint at £3 17s. 9d. an ounce, and is mixed with an alloy worth 5s. 2d. an ounce, in the proportion of 11 of gold to 1 of alloy. Sovereigns are coined of the mixture, each weighing 5 dwt. 4 gr. : find to the nearest penny the mint profit on 100 sovereigns.

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

1. Find the value of 3 tons 3 cwt. 3 qr. 21 lb. at 16s. 8d. per cwt.

2. Show how the product of 315 and 285 may be obtained without multiplying out.

3. Simplify $\left\{ 1 + \frac{1}{2}\left(\frac{\frac{3}{4} + \frac{5}{6}}{\frac{4}{7} + \frac{5}{12}} \right) \right\} \times \frac{3\frac{5}{7} - 2\frac{1}{2} \text{ of } 1\frac{1}{14}}{3\frac{5}{7} \text{ of } 2\frac{1}{2} - 1\frac{1}{14}} \div \frac{8\frac{4}{5}}{10\frac{3}{25}}$.

4. Divide 0·0576495 by 384·33 ; and express 1·2̇ year − 1·3̇2̇7̇ of 308 days as the decimal of half a year.

5. Show that the difference between the simple interest and the true discount on any sum of money for a given time at a given rate is equal to the interest on the true discount for the same time and rate ; and find this difference on £750 16s. due 2½ years hence at 2⅖ per cent.

6. A has an income which is 0·69 of $\left\{ \frac{7\frac{3}{4} - 3\frac{1}{2}}{7\frac{3}{4} + 3\frac{1}{2}} \div \frac{17}{15} \right\}$ of B's : compare their incomes ; and, if B after spending £364 per annum has a surplus of 0·545 of his income, find A's income.

7. If 7 per cent. is lost by selling goods for £145 6s. 3d., what would be gained per cent. by selling them for £168 15s.?

8. A and B start at the same time to meet each other from two places 15½ miles apart: when and where do they meet if A walks at the rate of 3½ miles per hour and B at 4¼ miles per hour?

9. If wages vary as the price of wheat, and nine men working for eight weeks earn £43 4s., when wheat is 48s. a quarter, find the price of wheat when eight men working for ten weeks earn £67 10s.

10. A cubic foot of gold is extended by hammering so as to cover an area of six acres: find within one ten-millionth of an inch the thickness of the gold as a decimal of an inch.

11. Find the cube root of 0·121861281 to three places of decimals; and the sixth root of 24794911296.

12. A traveller goes to Paris with £57 10s., which he exchanges for French money at the rate of 25 fr. 35 c. the £1. During his stay he spends 830 fr. 50 c., and on leaving changes the remainder into English money at the rate of 25 fr. 20 c. the £1: find how much he receives to the nearest halfpenny.

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

1. If the angle between the zenith and the sun at noon on the 22nd December (the summer solstice) is found to be 26½ degrees, what is the latitude of the point of observation?

2. Explain the following terms: *Sargasso sea, cyclone, mistral, bore, solfatara, fumarole, striation, roches moutonnées, moraines, névé.*

3. Explain the phases of the moon. Show why the moon is in the meridian about 48 min. later each day than the day before.

4. " The Pacific is surrounded by a series of volcanic mountains, constituting a circle of fire." Mention in order the principal summits in this circle.

Give an example, taken from the North Island of New Zealand, of a volcanic line of weakness.

5. Explain the importance of ocean currents. How are they affected by (*a*) excess of saltness, (*b*) the earth's rotation, (*c*) submarine ridges, (*d*) continental masses? Illustrate your answer from the Pacific equatorial and the Peruvian current.

6. Describe briefly *two* of the following railway routes: North Pacific, Canadian Pacific, Russo-Chinese, Cape to Cairo.

7. In 1640 Berlin was a fishing village; in 1800 it had a population of 120,000; its present population is about 2,000,000 : account for its sudden rise and subsequent expansion, and compare its history with that of Cologne or Vienna.

8. Give geographical reasons for the rise of the following towns: Madrid, Singapore, Bombay, Christchurch (New Zealand), Moscow, Orleans, Rome, Paris, Dresden, Augsburg.

9. Illustrate by a diagram the position of the leading provinces of Austro-Hungary. Write a paragraph on the geographical distribution of its German, Slavonic, Romanic, Magyar, and Illyrian population.

10. What countries are the chief exporters of cinchona, diamonds, maize, rubies, pearls, timber, attar of roses, spices, indiarubber, roofing-slate, currants?

11. Since 1870 Germany has become a great commercial nation. Enumerate the branches of industry and trade in which the Germans excel.

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

1. Explain the terms *estuary, geyser, llano, magnetic pole, moraine, prairie, rapids, snow-line, steppe, tundra.*

2. Explain clearly and account for the difference between an " insular " and a " continental " climate. Illustrate your answer by a comparison between the climate of Ireland and that of Yakutsk.

3. What are the tropics? Trace the course of the Tropic of Cancer round the world, mentioning and briefly describing the various countries through which it passes.

4. Mention and briefly describe the chief desert regions of the world.

5. Give a list of the British possessions in Asia and Africa; state which of them have self-government; and give as full an account as you can of the following: Mauritius, Aden, Labuan.

6. Give an account of the mountain system of North and South America.

7. Mention the chief trade routes leading to New Zealand, and state what commodities are chiefly brought by each route.

8. Mention the chief ship canals of the world, and give any information you can about them.

9. What do you know of Abo, Apia, Beirut, Broken Hill, Duluth, Fashoda, Guam, Maimatchin, Palapye, Punta Arenas?

10. Draw a map of Africa south of the Equator, inserting as much detail as you can.

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

1. Describe the domestic policy of William the Conqueror.

2. Trace briefly the growth of Parliament up to the end of Edward the First's reign.

3. " The final result of the Great Rebellion was a return to the limited monarchy of the Lancastrian period." Describe and account for the loss of national liberties under the Tudor sovereigns.

4. Sketch the character of James I., and indicate the faults of his rule.

5. What events in 1647–48 led to the execution of Charles I.? Compare Charles's conception of kingship with Elizabeth's.

6. Enumerate briefly the military and naval operations of the British against the French from 1792 to 1813.

7. Outline the career of Marlborough, and illustrate his generalship by a description of the Blenheim campaign.

8. Write a short account of George Canning's political life, and describe the rise of the Conservative party.

9. Who were the leading writers of the reign of Queen Anne?

10. Write brief notes on Somers, Bolingbroke, the Bedford Whigs, the Rockingham Whigs, Pitt's India Bill, the National Debt, Wolfe Tone, Hooker, Cartwright, Lord George Sackville.

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

1. Describe the origin and development of popular representation in parliament.

2. Sketch the foreign policy of Queen Elizabeth.

3. Narrate the chief events that led to the English revolution, and compare its character with that of the French revolution.

4. When and under what circumstances did party government arise?

5. Give an account of the negotiations for the parliamentary union of England with (a) Scot-, land, (b) Ireland.

6. Describe the career of the younger Pitt.

7. Enumerate the chief inventions of the latter part of the eighteenth century, and show the general results of the consequent growth of manufactures.

8. What do you know of the following:—
> (a.) Reform of the calendar?
> (b.) Peace of Ryswick?
> (c.) Peace of Utrecht?
> (d.) Second Treaty of Paris?

9. Give as nearly as you can the dates of the following battles, name the contending parties, and indicate the results: Boyne, Trafalgar, Quiberon Bay, Austerlitz, Crecy, Navarino, Plassey, Malplaquet, Naseby, Salamanca.

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

1. " The new Tory party, under the son of Chatham, was identical with the Liberal party of modern times." Illustrate this statement.

2. Describe and explain the conduct of Walpole with regard to (a) pensioners, (b) coalitions, (c) Jacobites, (d) Dissenters, (e) Romanists.

3. " Idolatry of Parliament was the besetting sin of the middle of the eighteenth century." Mention some of the leading faults and mistakes of Parliament during this period.

4. Describe fully the provisions of the Treaty of Utrecht.

5. Discuss the character of Marlborough. Illustrate his military genius, with especial reference to the Blenheim campaign.

6. What were the relations between England and Germany from 1688 to 1837?

7. What do you know of the Peishwa, the Nizam, the Guicowar? Who were the Begums of Oude, Surajah Dowlah, Tippoo Sahib, Nuncomar?

8. Write a short account of Canning and Huskisson. To what great reforms was Canning opposed? What favourable explanation of his opposition can be given?

9. Outline the policy of the English Government towards Ireland in the eighteenth century.

10. Heine blames the Whigs of 1688 for asserting historical English rights instead of universal principles. What were the principal Whig doctrines?

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

1. Translate into English the following passages:—

(a.) TARQUIN THE PROUD.

Tarquinio, quamvis injusto domino atque acerbo, aliquamdiu in rebus gerendis prospere fortuna comitata est. Nam et omne Latium bello devicit, et Suessam Pometiam, urbem opulentam refert-amque cepit; et, maxima auri argentique praeda locupletatus, votum patris Capitoli aedificatione persolvit, et colonias deduxit, et dona magnifica Delphos ad Apollinem misit. Sed primum optimi regis caede maculatus integra mente non erat, et cum metueret ipse poenam sceleris sui summam, metui se volebat. Deinde victoria divitiisque subnixus exsultabat insolentia, neque suos mores regere poterat, neque suorum libidines. Itaque cum major ejus filius Lucretiae, Collatini uxori, vim attulisset, mulierque pudens et nobilis ob illam injuriam sese ipsa morte mulctavit; tum vir ingenio et virtute praestans, L. Brutus, depulit a civibus suis injustum illud durae servitutis jugum.

(b.) PAPIRIUS CURSOR.

Et fuit vir haud dubie dignus omni bellica laude, non animi solum vigore, sed etiam corporis viribus excellens. Praecipua pedum pernicitas inerat, quae cognomen etiam dedit; victoremque cursu omnium aetatis suae fuisse ferunt seu crurum vi seu exercitatione multa, cibi vinique eundem capacissimum: nec cum ullo asperiorem, quia ipse invicti ad laborem corporis esset, fuisse militiam pediti pariter equitique. Equites etiam aliquando ausos ab eo petere, ut sibi pro re bene gesta

laxaret aliquid laboris; quibus ille "Ne nihil remissum dicatis, remitto," inquit, "ne utique dorsum demulceatis, quum ex equis descendetis." Et vis erat in eo viro imperii ingens pariter in socios civesque. Praenestinus praetor per timorem segnius ex subsidiis suos duxerat in primam aciem; quem quum inambulans ante tabernaculum vocari jussisset, lictorem expedire securim jussit. Ad quem vocem exanimi stante Praenestino, "Agedum, Lictor, excide radicem hanc incommodam ambulantibus," perfusumque ultimi supplicii metu, mulcta dicta, dimisit.

2. Decline, in the singular, bellica laus, ille capax, omne crus; and in the plural, idem vir, eques quidam, segne subsidium.

3. Give the principal parts or the stems of the verbs vinco, peto, jubeo, excīdo, excĭdo, fundo, haurio, sedeo, gero, soleo.

4. Explain the use of the genitive in the phrases "invicti corporis," "cibi vinique capacissimum," "aliquid laboris."

5. State fully how place whence, where, and whither are expressed in Latin.

6. Give, with their meanings, three verbs that take a genitive, three that take a dative, and three that take an ablative; and give, if you can, a reason for the construction in each case.

7. Give, taking any verb you like as an example, all the cases of the verb-noun infinitive.

8. Translate into Latin :—
(a.) Throwing away their javelins, our men attacked the enemy fiercely with their swords.
(b.) Tell me what you think of the matter.
(c.) It was reported that the enemy had taken possession of the hill.
(d.) He sent messengers to demand hostages.
(e.) Being afraid of losing the opportunity, Cæsar hastened forward with all his forces to seize the town.

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

1. Translate into English—

LES DÉBOUCHÉS BRITANNIQUES.

En dehors du Royaume-Uni, l'empire britannique est le plus étendu et peut-être le plus peuplé du monde.

Son étendue *dépasse* deux fois la superficie de l'Europe; sa population est à peu près égale à celle du continent européen. Quant à sa richesse, elle dépasse celle de l'Allemagne, à n'en *juger* que par la somme des importations.

La plupart des vastes territoires de ces empires futurs sont merveilleusement dotés par la nature. Nous *n'entendons* par là cette exubérance de la végétation, ces forêts immenses qui se retrouvent sous les tropiques et dans l'Amérique du Sud.

La France, au Congo, en Indo-Chine, à la Guyane est aussi bien *pourvue* à cet égard que la Grande-Bretagne.

Nos voisins ont mieux : d'immenses espaces de terres saines, où l'Européen retrouve les cultures natales et où il est libre de *travailler* à l'abri des fièvres paludéennes et de l'anémie tropicale. Tel est le cas pour le Canada, l'ancienne Nouvelle-France, où plus de 5 millions d'Anglo-Saxons et de Français se *développent* paisiblement sur 400 millions d'hectares de terres exploitables.

Dans l'Afrique australe, la colonie du Cap et ses dépendances administratives *couvrent* une étendue supérieure à celle de la France. Avec le Natal et les républiques hollandaises de l'Orange et du Transvaal, qui sont encore des dépendances économiques de Durban et du Capetown, on y trouve plus de 3,200,000 âmes avec plus de blancs qu'en Algérie.

Enfin, l'Australie *forme* un troisième empire, exclusivement peuplé de blancs comme le Canada, mais infiniment plus riche et plus *développé* au point de vue économique. Quatre millions et demi d'Australiens anglo-saxons *paient* des budgets égaux à 750 millions de francs et *consomment* plus de produits européens que 300 millions d'Indous ou 30 millions d'Italiens.

2. Give the mood and tense of all the verbs in italics.

3. Translate into French—

The *Avare* may be called a classical play. The classical style, in the sense in which the word is used here, neglects everything special or realistic in order to dwell on what is general and typical. A character becomes a representative of a class, a mouthpiece to utter sentiments, an abstraction moving in a conventional world. Naturally the drawbacks (*désavantages*) of the classical spirit are less felt in a comedy, which, after all, must aim at reproducing contemporary society. But what is Harpagon? To what class of society does he belong? Where does he live? To some extent he is intended to be a representative of the old-fashioned, money-making *bourgeoisie* of Paris, a conservative in dress and manners. Still there is something unreal and conventional about him. . . .

The "dénouement" of the *Avare* in its conventional improbability verges upon the ridiculous. The humour and comic interest of the play are to be found in the incidents which draw out the central character.

4. Translate also—
Where did you go to-day?
I went to see the Exhibition.
Did you remain there a long time?
Yes, sir, about an hour and a half.
Were you not at home yesterday evening?
Not at all; I passed the night at a friend's.
I beg to acknowledge receipt of your letter of Tuesday last.
Go and fetch the doctor, please.
Why? Because my brother is very ill.

5. Write out in full—
    (a.) The future of *vouloir*.
    (b.) The preterite of *naître*.
    (c.) The imperfect subjunctive of *se lever*.
    (d.) The present indicative of *teindre*.

6. What single French word is equivalent to each of the following :—
    À l'avenir; bien que; de qui; faire voir; pas beaucoup; de bonne heure; jour précédent; il n'y a pas longtemps.

7. Give the plural forms of—
    Une autre affaire; celui dont; cette voix; quelqu'un; ver-a-soie; pied-à-terrè; lazarone; te-Deum; il est trop jeune.

8. Give your reasons for thinking that the past participles in the following sentences are correctly used or otherwise :—
    Ils ont *ri* et puis ils sont *partis*.
    Elle est plus jeune que je ne l'avais *cru*.
    Le sort les a *faits* naître dans l'obscurité.
    Elle s'est *coupée* le doigt.
    Montrez-moi les lettres que vous avez *écrites*.

9. Give the French for—
    I like to sing. I do not sing. We never dine very early. He loves nobody. Three times seventeen are fifty-one.

10. What difference does the use of a capital initial make in the meanings of the following :—
    L'Etat, l'état; Dieu, dieu; Français, français; La Manche, la manche; Pierre, pierre; La Porte, la porte.

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

1. Translate into English,—
    Der König von Spanien hatte ein jungen Edelmann nach Rom gesandt um dem Pabste zu seiner Erwählung Glück zu wünschen. Der Pabst war unzufrieden, dass man ihm einen so jungen Menschen gesandt hatte, und sagte zu demselben : Ihr König scheint sehr kurz an Männern zu sein, dass er mir einen Gesandten ohne Bart schickt.
    Der stolze Spanier antwortete schnell : Wenn mein Herr gedacht hätte, dass Sie das Verdienst nach dem Bart beurteilen, dann hätte er Ihnen einen Bock gesandt, anstatt einen seiner höchsten Edelleute.

2. Translate also,—
    Um wieviel Uhr geht die Sonne auf?
    Wollen Sie das Feuer in unserem Zimmer anzünden?
    Die Stadt ist mit Gas erleuchtet.
    Alle Fenster waren offen.
    Wo wird diese Zeitung gedrückt.
    Ich verstehe mehrere Sprachen.
    Die Läden sind geschlossen.
    Es ist heute nicht so warm wie gestern.

3. Distinguish between—
    fallen and fällen;
    kranken and kränken;
    drucken and drücken;
    setzen and sitzen.

4. Form verbs with the prefixes *be, emp, ent, erz, ge, miss, un, ur, ver, and zer*.

5. Translate into German,—
    He does not command it, but wishes it.
    She is not only talented, but also industrious.
    Were you not in the theatre yesterday? Yes, I was there.
    If I had the money, I would buy the house.
    Be upright, that I may be able to trust you all the more.
    I should like to take a walk, but the weather is too bad.

6. State all you know about the auxiliary verbs of mood.

7. Give in tabular form the three persons singular of the indicative present and imperfect, and the two participles, of beginnen, bergen, denken, essen, geben, geniessen, graben, messen, rathen, schlagen.

8. Sixteen monosyllabic adjectives modify their vowels in the comparative and superlative. Name as many of them as you can, and give the meaning of each.

9. When are verbs compounded with the prepositions *durch, über, unter,* and *um* separable, when inseparable? Give examples.

10. What do you know about the adverbs *hin* and *her ?* Translate into German,—
    Where are you going to?
    Where do you come from?
    Come upstairs.
    Ferry him across.
    Where am I to go?

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

1. Write down the algebraical expression for the following:—
   The number x is mutiplied by itself and is added to the result obtained by multiplying the number y by itself, and the sum is divided by the sum of the numbers x and y ; the quotient is subtracted from that number which when multiplied by itself gives the product of the numbers x and y. If $x=4$ and $y=9$, find the numerical value of the final result obtained.

2. Multiply $3-2x+4x^2-5x^3$ by $2x^2-x+4$, and find the value of x which makes the product exactly divisible by x^2-x+3.

3. Find the factors of—
$$6a^2-7ab-3b^2;$$
$$x^3+a^3-a^2x-ax^2;$$
$$2a^2-2b^2-2c^2+3ac-5bc.$$

4. Simplify $[1-(1+(1-x))+x^2] \times [-1+(1-(1-x+x^2))]$;
and find the quotient when $(x+y)^3+(y+z)^3+(z+x)^3-3(x+y)(y+z)(z+x)$ is divided by $x+y+z$.

5. Simplify $\dfrac{2x^3-5x^2-4x+3}{3x^3-8x^2-5x+6}$

$$\frac{\dfrac{a-1}{3}+\dfrac{a-1}{a-2}}{\dfrac{a+2}{4}+\dfrac{a+2}{a-3}} \div \frac{\dfrac{a+3}{7}-\dfrac{a+3}{a+4}}{\dfrac{a-2}{3}+\dfrac{a-2}{a-1}}$$

6. Show that if $2s=a+b+c$, then $(s-a)^2+(s-b)^2+(s-c)^2+s^2=a^2+b^2+c^2$, and
$$\frac{1}{s-a}+\frac{1}{s-b}+\frac{1}{s-c}-\frac{1}{s}=\frac{abc}{s(s-a)(s-b)(s-c)}$$

7. Solve the equations $\dfrac{1}{x-a}-\dfrac{1}{x-b}=\dfrac{1}{x+b}-\dfrac{1}{x+a}$

$$\left.\begin{array}{l}\dfrac{x-y}{2}+\dfrac{x+y}{3}=2\tfrac{1}{2}\\[2mm]\dfrac{x+y}{2}+\dfrac{x-y}{3}=4\tfrac{1}{6}\end{array}\right\}$$

8. A rectangular field is p feet long and q feet wide, and from one corner there is cut off a portion in the shape of a right-angled triangle, of which the right angle coincides with one of the corners of the field, and whose sides, which contain the right angle and which are each a feet long, are in the direction of the sides of the field. Find the cost of fencing in the remainder at £x a chain.

9. How much tea at 1s. 8d. a pound must be mixed with 150 lb. at 2s. a pound so that when the mixture is retailed at 2s. a pound a gain of 8 per cent. is made ?

10. A cyclist sets out from P and travels at a uniform speed towards Q, which is 180 miles distant. At the same instant as he starts another cyclist starts from Q and travels uniformly towards P. They reach their destinations respectively $12\tfrac{1}{2}$ hours and 8 hours after they meet: find the rate at which each travels.

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

1. Define the terms *power, index, cube root, reciprocal.*

Show that $a^0 = 1$, that $a^{\frac{1}{3}} = \sqrt[3]{a}$, and that a^{-n} is the reciprocal of a^n.

2. Divide $x^{\frac{4}{3}} - 2x^{\frac{2}{3}}y^{\frac{2}{3}} + y^{\frac{4}{3}}$ by $x^{\frac{2}{3}} + 2x^{\frac{1}{3}}y^{\frac{1}{3}} + y^{\frac{2}{3}}$, and $25x^{6n} - 16x^{4n} - 8x^{2n} - 1$ by $5x^{3n} + 6x^{2n} + 2x^n + 1$.

3. Explain what is meant by the *highest common factor* and the *lowest common multiple* of two quantities, and show that the lowest common multiple is the product of the two quantities divided by their highest common factor.

4. Find the H.C.F. and the L.C.M. of—
   (a.) $4\,(x^2y + xy^2)$; $6\,(x^3 - xy^2)$, and $9\,(xy^2 + y^3)$
   (b.) $x^6 + 3x^5 + x + 3$ and $x^3 - 8x + 3$

5. Simplify the expressions—
   (a.) $\left(\dfrac{1}{a} + \dfrac{1}{ab^3}\right) \div \left(b - \dfrac{1}{b}\right)$
   (b.) $\dfrac{x - (x^2 - y^2)^{\frac{1}{2}}}{(x + y)^{\frac{1}{2}} - (x - y)^{\frac{1}{2}}} + \dfrac{x + (x^2 - y^2)^{\frac{1}{2}}}{(x + y)^{\frac{1}{2}} + (x - y)^{\frac{1}{2}}}$

6. Extract the square roots of—
   $a^{4n+2} + 6a^{3n+1} + 9a^{2n} - 10a^{2n+1}c^{n-2} - 30a^n c^{n-2} + 25c^{2n-4}$, and of $38 - 12\sqrt{10}$.

7. Solve the equations—
   (a.) $\dfrac{1}{x} + \dfrac{b}{x + a} = \dfrac{b + 1}{x + b}$
   (b.) $\sqrt{4a + x} = 2\sqrt{b + x} - \sqrt{x}$
   (c.) $\dfrac{x + y}{3} + 2z = 21,\ \dfrac{y + z}{2} - 3x = -65,\ \dfrac{3x + y}{9} - z = 4$
   (d.) $\dfrac{a}{x} + \dfrac{b}{y} = c,\ \dfrac{b}{y} + \dfrac{c}{z} = a,\ \dfrac{c}{z} + \dfrac{a}{x} = b$

8. A bicyclist accomplished a journey in a hours. In returning he travelled n miles an hour faster, and finished the journey in b hours. What was the distance ?

9. A farmer sold wheat and oats each to the value of £35, the price of the wheat a bushel being twice that of the oats. If he had sold 100 bushels more of wheat and 100 bushels less of oats he would have received altogether £8 15s. more. Find the quantities sold and the prices obtained.

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

1. Give Euclid's definition of a point and of a line, and explain them. Define the terms *angle, right angle, circle, scalene triangle, isosceles triangle, rhombus, parallel straight lines, parallelogram, trapezium, gnomon.*

2. If two triangles have three sides of the one equal to three sides of the other the triangles are equal in every respect.

3. The angles that one straight line makes with another straight line, on one side of it, are either two right angles, or are together equal to two right angles.

The bisectors of adjacent angles are at right angles.

4. The greater angle of every triangle is opposite to the greater side.

Find a point in a given straight line the difference of the distances of which from two given points on the same side of the line is the greatest possible.

5. Triangles on the same base and between the same parallels are equal.

Bisect a triangle by a straight line drawn through a given point in one of the sides.

6. If a straight line be divided into any two parts, the square on the whole line is equal to the squares on the two parts, together with twice the rectangle contained by the parts.

7. In a triangle the square on the side subtending an acute angle is less than the squares on the sides containing that angle by twice the rectangle contained by either of these sides, and the straight line intercepted between the perpendicular let fall upon it from the opposite angle and the acute angle.

8. A, B, C, D are four pegs in the ground. A fifth peg, P, is tied by ropes to A, B, C, and D Find where P should be placed so as to use as little rope as possible.

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

1. Explain the terms *postulate, hypothesis, corollary, converse proposition, gnomon, locus.*

2. If two angles of a triangle are equal to one another, the sides also which subtend the equal angles shall be equal to one another.

If the straight lines BO, CO be drawn, making equal angles with the base BC of an isosceles triangle ABC, show that the line AO, which joins the intersection of these lines with the vertex of the triangle, bisects the vertical angle.

3. Equal triangles on the same base, and the same side of it, are between the same parallels.

In a quadrilateral figure ABCD the diagonals AC, BD make equal angles with DC, and the angle DAC is equal to the angle CBD : show that the sides AB and DC are parallel.

4. In any triangle the square on a side opposite to an acute angle is less than the sum of the squares on the sides containing the acute angle by twice the rectangle contained by one of the latter lines and the projection of the other upon it.

5. Show how to divide a given straight line into two parts so that the rectangle contained by the two parts may be equal to a given square. Is there any solution of this problem possible when the side of the given square is greater than half the given line ?

6. To draw a straight line from a given point, either without or in the circumference, which shall touch a given circle.

What is the *locus* of the extremities of equal tangents to a given circle ?

7. If two straight lines cut one another within a circle, the rectangle contained by the segments of one of them is equal to the rectangle contained by the segments of the other.

Conversely, If two straight lines cut one another so that the rectangle contained by the segments of one of them is equal to the rectangle contained by the segments of the other, their four extremities will lie in the circumference of a circle.

8. If a circle roll within another of twice its diameter, any point in the circumference of the former will trace out a diameter of the latter.

9. About a given circle to circumscribe a triangle equiangular to a given triangle.

Show that the radius of the circle circumscribing an equilateral triangle is double of the radius of the circle inscribed in the same triangle.

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

1. If g denote the acceleration of gravity, explain precisely what you mean when you write $g = 32$. Describe a method of proving experimentally that the acceleration of gravity is sensibly uniform.

A stone is projected vertically upwards with a velocity of 160 ft. per second : find the height to which it will rise.

2. State Newton's *Second Law of Motion.* Explain what is meant by the phrases " change of motion " and " impressed force " as used in this law. Show how the law leads to the definition of an absolute unit of force.

In what time will a force, equal to the weight of 5 lb., impart to a body of 40 lb. mass a velocity of 120 ft. per second, and what space will be passed over by the body during this time?

3. Define *work* and *energy*, and explain how they are measured.

A forty-pound cannon-ball is moving with a velocity of 1,200 ft. per second: find the amount of work which it is capable of performing.

4. Enunciate the "triangle of forces." Show that the principle of this proposition may be extended so as to apply to a polygon having any number of sides.

Two straight lines, AB and CD, bisect one another in O, and P is any point: show that the four forces represented by PA, PB, PC, and PD have a resultant which is represented by 4 PO.

5. Find the position of the centre of gravity of a uniform triangular plate.

Find the position of the centre of gravity of three particles, placed at the angular points of an equilateral triangle, and weighing 3, 3, and 4 oz. respectively.

6. What is the sole condition of the equilibrium of a body which is free to turn about a fixed axis?

A uniform straight lever is 6 ft. long and weighs 12 lb. If weights of 24 and 36 lb. are suspended from its extremities, find the position of the fulcrum on which it will balance.

7. Show that if a substance be weighed successively in the two scales of a balance with unequal arms its true weight is a mean proportional between the apparent weights.

8. What is meant by the *whole pressure* of a liquid on a surface? In what case is the whole pressure equal to the resultant pressure?

The water in a canal rises to the height of 10 ft. against a lock gate whose breadth is 20 ft.: find the whole pressure upon the gate.

9. Explain the method of determining the specific gravity of a liquid by means of the hydrostatic balance.

A quartz crystal, whose weight is 318 grains, loses 120 grains when weighed in water, and 96 grains when weighed in alcohol. When a piece of wood of 240 grains weight is attached to the crystal they weigh together 118 grains in water. Required the specific gravities of alcohol, of quartz, and of the wood.

10. Make diagrams of the *forcing-pump* and the *condensing-syringe*, and explain their action.

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

1. Explain the method of graduating a mercury thermometer according to the centigrade scale. Express the following Fahrenheit temperatures in the centigrade scale: 40°, 0°, 140°.

2. State the laws of fusion, and explain what is meant by the *latent heat* of fusion.

If 6 oz. of dry snow at 0° C. be melted in 15 oz. of water at 40° C., find the resulting temperature.

3. Define *thermal capacity* and *specific heat*.

If the density of iron is 7·6, and its specific heat 0·115, find the thermal capacity of unit volume. If 10 cubic centimetres of iron at 100° C. be immersed in 200 cubic centimetres of water at 9° C., find the resulting temperature.

4. Distinguish between the *conduction*, the *convection*, and the *radiation* of heat.

5. What is meant by a "musical interval"? Give an account of the "diatonic scale."

6. When an object is placed 1 ft. from a convex lens its image is formed on the other side of the lens at a distance of 2 ft. from it. Where will the image be formed when the object is placed 9 in. from the lens?

7. Describe, with the aid of a diagram, the arrangements which you would make for exhibiting on a screen the solar prismatic spectrum. Indicate on your diagram the order in which the colours follow one another in the spectrum.

8. Explain what is meant by "magnetic induction" and by "lines of magnetic force." State the elementary laws of magnetic force.

9. A plate of metal is placed over the disc of a gold-leaf electroscope at a small distance from it, and a glass rod electrified by rubbing with silk is held over the metal plate. Describe the electrical condition of the metal plate and the electroscope (1) when the plate is insulated, (2) when it is connected with the earth.

10. State the laws of electrolysis. Explain the arrangements which you would make for obtaining the products of the electrolysis of acidulated water.

11. A voltaic cell gives a certain current through an external resistance of 75 ohms, and when the external resistance is reduced to 35 ohms the current from the cell is doubled. What is the resistance of the cell?

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

1. Describe with equations the preparation of nitric acid and of ammonia. How can the percentage of nitric acid in a solution be ascertained?

2. What experimental evidence do you know for the formula H_2O? Why would not HO or H_4O_2 equally well represent the molecule of water?

3. What weight of chlorate of potash will yield sufficient oxygen to burn 100 grams of marsh gas? What volume will the products of combustion occupy at 150° C. and 760 mm. pressure? (K = 39; Cl = 35·5; O = 16; C = 12; H = 1.)

4. State any laws that you know bearing on the behaviour of gases as regards (*a*) pressure, (*b*) temperature, (*c*) diffusion, (*d*) solution.

5. Give a short account of the allotropic forms of carbon. How can it be proved that they are only different forms of the same elementary substance?

6. Show by a comparison of their chemical and physical properties that chlorine, bromine, and iodine may reasonably be regarded as members of the same family of elements.

7. When hydrogen and chlorine are exploded no permanent change of volume is produced. What theoretical deduction as to the molecular state of chlorine and of hydrogen can be made from this observation?

8. How is sulphuric acid manufactured? What is the action of the cold dilute and the hot concentrated acid upon zinc, copper, and potassium ferrocyanide respectively?

9. Give a short account of the chemistry of arsenic, and explain any method whereby the presence of arsenic in a solution may be detected.

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

[Candidates must answer questions in one branch of the subject only. All answers must be illustrated, where possible, by diagrams.]

I. Animal Physiology.

1. What do you understand by protoplasm? Give some account of its characteristics. What part of the body would be most suitable for examining protoplasm?

2. What is a nerve; and what physiological relation has a nerve (*a*) to a muscle on the one hand, and (*b*) to the central masses of the nervous system on the other?

3. Write a short account of the blood. Describe the general course of the circulation of the blood in a vertebrate animal—say, the frog, or man.

4. Describe the lungs, their structure, their situation in the body, and their relations to other organs. How are the lungs filled and emptied; and what purposes do they serve?

5. By what parts of the body are the following chemical substances removed : Carbonic acid, and deleterious nitrogenous matters? Give a brief account of the organ or organs you mention.

6. Write a description of a hen's egg. Point out, as far as you can, what purpose is served by each of the various parts, and what finally becomes of it. What is the first traceable change in the development of the egg into a chick?

7. A meal consists of a fat mutton chop, potatoes, beans, rice pudding, bread, and cheese. Refer these to their proper categories as " food-stuffs" in a chemical sense, and trace the changes that each undergoes in its course along the alimentary canal.

II. Botany.

1. Write an account of a plant " cell" such as occurs in the " mesophyll" of a leaf. What modifications of the cell would you find in (*a*) the vascular bundle, (*b*) the parenchyma of the stem, and (*c*) the epidermis?

2. What are the chemical elements necessary for the building up of new living plant material? How and whence does a green plant obtain these various substances?

3. Describe carefully a complete transverse section of the stem of such a plant as the bean (or any other with which you are familiar). State the functions of all the various structures you describe.

4. Give an account of the anatomy of any *flower* with which you are familiar. Point out the functions of the various parts as far as you can.

5. Write an account of the structure of a fully developed *ovule*. What changes take place in it on becoming a *seed*, and what starts these changes?

6. State in general terms what you understand by a *fruit*. Describe in technical language the fruit of the following: Bean plant, buttercup, daisy, cherry, gooseberry; and indicate clearly what parts of the flower are involved in each instance.

7. Write an account of either of the orders (1) *Leguminosæ*, or (2) *Myrtaceæ*, or (3) *Scrophularineæ*, with especial reference to their representatives in New Zealand.

Music.—Time allowed : 3 hours.

Instructions to Candidates.

(*a.*) For the sake of uniformity it is requested that the notes of the scale be referred to by their Tonic Sol-fa names—Doh, Ray, Me, Fah, Soh, Lah, Te—or their initial letters.

(*b.*) The Tonic Sol-fa terminology is used throughout this paper as being the more generally known among school teachers; but, where considered necessary, explanations in ordinary musical language are given in brackets, thus: " Three-pulse measure [Triple time]."

(*c.*) Answers requiring the use of the staff notation may be written in their proper place in the body of the paper, candidates ruling their own staves.

(*d.*) All candidates are expected to attempt the practical work (Question 13). The time and tune tests may be taken in either notation.

1. Describe briefly the construction of the diatonic major scale, and draw a modulator [scale diagram] of one octave to illustrate it.

2. In what order would you teach the tones of the Doh chord? In what order would you subsequently add the remaining tones of the scale?

3. Mention some of the causes of flat singing, and say how you would deal with this difficulty in classes of children.

4. How would you begin the important subject of ear training?

5. By what means would you endeavour to get sweetness and good tone in school singing?

6. Write, in either notation, a time exercise of six four-pulse measures [six bars of common time], introducing two-pulse, one-pulse, and half-pulse tones [minims, crotchets, and quavers]; also pulse-and-a-half tones [dotted crotchets], and whole-pulse and half-pulse silences [crotchet and quaver rests]. The exercise to be written on one note throughout.

7. In going to the first sharp key, by what interval *upward* is the Doh moved? What tone of the original key is displaced? What new tone is introduced? Describe in a similar way the process of going to the first flat key.

8. Write, in either notation—(*a*) One major and one minor third, (*b*) one perfect and one imperfect [diminished] fifth, (*c*) one minor seventh, (*d*) one minor second, (*e*) one augmented fourth.

9. Write in upright columns the Lah mode [minor scale] in its *melodic* form, ascending and descending.

9a. As an alternative to the foregoing question, write in the staff notation the scale of C minor, melodic form, ascending and descending, prefixing the proper key-signature.

10. Give the meanings of (*a*) *andante*, (*b*) *rallentando*, (*c*) *piu mosso*, (*d*) *vivace*, (*e*) *largo*, (*f*) *mezzo-forte*, (*g*) *da capo*, or *D.C.*

11. What means would you adopt for securing good pronunciation in the words of a school song?

12. Write from memory, in either notation, the melody of "God save the Queen," in key A.

13. Take the practical tests that will be given you by the Examiner.

Any two of the following phrases to be imitated by the candidate from the Examiner's pattern :—

Key C (or D).

(*a.*) ‖ s : r | f : m | d : — | : ‖   (*b.*) ‖ m : r | t : l | s :— | : ‖

(*c.*) ‖ d₁ : m | fe : l | s : — | : ‖   (*d.*) ‖ f : t₁ | m : r | d :— | : ‖

The following time test to be sung to Lah, on any convenient note, the Examiner giving the rate of speed :—

About ♩ = 66.

{ 1 | 1 :— :1.1 | 1 : :1.1 | 1 : :1.,1 | 1.1:1 :—.1 | 1 :— : .1 | 1.1:—.1:1.1 |

| 1 : :1.,1 | 1 :—:— ‖

The following tune test to be sung to the sol-fa syllables, and then to Lah, the Examiner giving the key-note :—

Key D (or C).

‖ d :—.r | m : s | r :—.m | f :1 | s :d¹ | t :1 | s :fe | 1 :s | r :—.m | f :1 |

| m :—.f | s :t | d¹ :ta | 1 :r¹ | s :t | d¹ : — ‖

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. Give some sentences in Maori illustrating the various uses of the singular, dual, and plural numbers.

3. Translate the following into Maori :—

This gun is for him to shoot with. That gun is to shoot him with. These clothes are for him. Those fish are for him. This is a young horse. That is a young man. This person is a male. Those persons are females. These birds are females. That bird is a male. On your journey from Napier to Taupo, when you get to where the road branches into three, take the middle road; do not go by the one turning off to your left. This house is different from that one standing over there. How many children are being taught the Maori language at your school? Which do you prefer—to stay at home or to go to school?

4. Translate the following into English :—

He aha tera mea e piata mai ra i runga i te kaipuke? No hea koe; ko wai te ingoa o to papa me to iwi? Kua tae a Hoani ki te mania ki te hopu i nga hoiho, whaiwhai noa ia kihai i mau. He rere ke tona potae i tou. Hokowhitu te ope taua. Mau e tatau nga hipi, ka hoatu ai ma Hemi e whiu.

5. The King did not answer these foolish men for some time. At last he said, "I am tired; bring me a chair." And they brought him one, and he made them sit close to the water; and he said to the sea, "I command you not to let your waves wet my feet." The flattering lords looked at one another, and thought the King must be mad to think the sea would really obey him, although they had been so wicked as to tell him it would the moment before. Of course, the sea rose, as it does every day, and the King sat still till it wetted him and all the lords who had flattered him so foolishly. Then he rose up, and said to them, "Learn from what you see now that there is no being really great and powerful but God. He only who made the sea can tell it when and where to stop." The flatterers were ashamed, and saw that the King was too good and wise to believe their false praise.

Formerly there were white slaves in almost every country. Afterwards, when white slaves were not allowed by law, people went and stole black men from their homes and families, and carried them to places so far from their homes that they could never get back again, and made them work for them. And it is very lately that a law has been made that there shall be no more slavery.

6. Ka whakatika te taua a Te Rangiita ki te ngaki i te mate o tona taokete, ka tika ma te huarahi e ahu ana ki Waikato. E toru nga ra ki te huarahi ka tae ki tetahi awa nui. E waipuke ana te awa ra, a i te mea he awa hohonu, whanui hoki, ka tahuri te ope ki te hanga mokihi hei whakawhiti i a ratou. Ka oti nga mokihi, heoi, whiti pai ana te taua, kaore he tangata o ratou i riro i te wai, notemea he mohio katoa ratou ki te kau. Katahi ka haere tonu te ope ra, ka tae ki tetahi ngaherehere; ka tomo i te ngaherehere, no te putanga ki tera whaitua ka tutaki i te tira e haere mai ana, he Pakeha tetahi o taua tira. I te mea he tauhou te ope taua ki tenei mea ki te Pakeha, tahuri ana ratou ki te matakitaki i taua tangata. Ka mutu ta ratou matakitaki ka uia te whenua o tera tu tangata, ka whakahokia atu ko Ingarangi. Tukuna ana taua Pakeha me ona hoa kia haere. Maro tonu te haere a te ope taua i tona huarahi, a ka tae ki te pa o te iwi o Waikato. Rokohanga atu e pae ana te iwi ra i waho o te pa. Whakaekea tonutia atu te pa e te taua, horo ana te pa a whati ana nga tangata o roto. Katahi ka patua te iwi ra e te taua a kore rawa he morehu i rere. Heoi ano, i te mea kua ea te mate o tona taokete, hoki ana te taua a Te Rangiita ki tona whenua i haere mai ai.

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

1. Define the unit of circular measure, and find its value in degrees.

Express in circular measure the interior angle of a regular dodecagon. What number will express the same angle if the unit of measure is the interior angle of a regular hexagon?

2. Find the numerical value of cos 30°, and deduce the value of cos 15°. Set down all the angles between 0° and 500° the sines of which are equal to cos 15°.

3. Prove the following relations :—

(a) $\cos (A + B) = \cos A \cos B - \sin A \sin B$;

(b) $\cos 3A = 4 \cos^3 A - 3 \cos A$;

(c) $\tan (45° + \frac{A}{2}) + \cot (45° + \frac{A}{2}) = 2 \sec A$;

(d) $\dfrac{4 \tan A (1 - \tan^2 A)}{(1 + \tan^2 A)^2} = \sin 4A$.

4. Find the value of A from the equation—
$$\tan (45° + A) = 3 \tan (45° - A).$$

5. If A is an angle of a triangle, find an expression for $\sin \frac{1}{2}A$ in terms of the sides. Find also an expression for the area of the triangle in terms of the sides.

6. Show that in any triangle, adopting the usual notation—

(a) $\dfrac{\sin (A - B)}{\sin (A + B)} = \dfrac{a^2 - b^2}{c^2}$;

(b) $\sin C (\cot A - \cot B) = \dfrac{b^2 - a^2}{ab}$;

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

7. If in a triangle $a = 6$, $b = 7$, $c = 9$, find cos A, tan $\frac{1}{2}$A, and the area.

8. Prove that $\log. \frac{1}{m} = - \log. m$, and that $\log. m^n = n \log. m$.

Given log. 2 = 0·301, find the logarithms of 160, 0·32, 1·25, and sin 45°. What is the logarithm of sin 45° to base 2?

9. A surveyor, desiring to find the height of a mountain, chose two stations in a line with the top of the mountain. The distance between the two stations was 100 chains, and at the nearer station the elevation of the mountain was observed to be 60°. At the more distant station the elevation of the top of the mountain was found to be 30°, and that of the other station 15°: what was the height of the mountain?

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 begun 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

4—E. 1A.

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.

There are certain maladies that attack the human frame which are necessarily fatal, and others which naturally end in a speedy death, but may be so treated as to lead to a protracted state of weakness and suffering incompatible with any enjoyment of life or useful activity, and from which there can be no reasonable hope of ultimate recovery. In uncivilised nations such diseases are of short duration. They are either left to take their course without inter-

1 ference or the | patient is expedited on his journey to the grave.

In civilised nations, and particularly of late years, it has become the pride of many in the medical profession to prolong such lives at any cost, discomfort, or pain to the sufferer, or of suspense or exhaustion to his family. The patient has come to a point where he cannot bear the thought of eating. The throat declines to swallow what the stomach is no longer able to

2 digest. He craves | nothing but to be alone. A few hours and nature will come to his release. She is already, perhaps, fast throwing him into that happy unconsciousness of pain which we call lethargy. The vital forces have been spent. The main-spring is broken, and the watch has run down. It can be made to tick feebly for a minute or two by shaking it

3 hard enough, but only another main-spring can mend it. Only another soul, another world, | can give value to this human life that is ready to flicker out because it is worn out. The family ask the doctor if there is no hope, and he responds with some sharp stimulant; some hypodermic injection; some transfusion or infusion to fill out for a few hours the bloodless veins; some device for bringing oxygen into the congested lungs that cannot breathe the

4 vital air; some cunning way of stimulating some other organ to do the stomach's work. | The sufferer wakes to pain, and gasps back to a |few more days of life. Were they worth the having? Do they bring life, or a parody of life? Has nature—that is, the divine order of things—been helped or thwarted? For the time thwarted, but not for long. The suffering, or, at best, the lethargic existence, has been successfully protracted, but the body will soon

5 falter and fail in the unwonted functions forced upon parts of it, made | for other uses, and death comes, to the relief of the dying and living alike. Nature has kindly smoothed the sufferer's pillow by leading the way to that gradual exhaustion of the vital powers which follows the refusal of the stomach to receive or to digest food.

To force nutriment into the system in such a case through other channels is simply to

6 prolong a useless struggle at the cost of misery to the patient and to the profit of | no one but the doctor and the nurse. In determining the nature of a disease we look for the cause to the symptoms. Nature has so ordered it that symptoms are observed at that time of life when life is most worth saving. A lesion of one organ may then be expected to produce a reaction throughout the system. There is a general sympathy of the parts. On the other hand, in old

7 age the outward manifestations of an interior | lesion seldom indicate that more than one organ is affected, and are often hardly noticeable at all. The patient does not know that he is a patient. There is no occasion that he should. The weakest part of his bodily mechanism has broken down. Why patch it up? Another is hardly less weak, and must soon succumb. Better for him and for his friends that his last days should be unclouded by the apprehension

8 of coming death, and the change | come to him quietly as a dream in sleep. It is a great responsibility this that rests on modern medicine. It has a power to hold us back from the grave for a few days, a few weeks, a few years, to which the physician of antiquity was a stranger. But are we sure that the course of nature with mankind is really at

9 fault? May not she know best when she had had enough of us in this state | of being? Or, to rise to a higher and truer level, may not the God over all, who has ordained these laws of bodily decay, though He has also ordained these laws later discovered by us of scientific physiology, be safely left to name the time for calling His children home? That He has given men some brief power to hold them back is not of itself a warrant for its use,

10 when the result will be only a short postponement. |

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

There is nothing which, in these closing years of the nineteenth century, lies more heavily upon the minds of thoughtful men in Europe than the state of mutual distrust and suspicion in which the great European nations find themselves. We in England have long been accustomed to see and to deplore the existence of these feelings between the five great Powers of the Continent. It is only within the last ten years that we have come to-

experience the same phenomena as regards ourselves. The tension with Germany, which became manifest three years ago, and for which there was really never any sufficient reason, has now relaxed; but the tension with France, visible from an earlier date, became quite

1 acute | in September last, and (though at present less pronounced) still occupies our thoughts. It has nothing to do with the old traditional rivalry and hostility of England and France which came down from the Middle Ages and played so great a part in the wars of last century. That feeling of antagonism had quite vanished from the minds of Englishmen, and had been succeeded by friendliness and good-will, based on more frequent personal intercourse and on the commercial benefits of a large and (at times) expanding trade maintained, in spite of a French protective tariff, between the two countries. When Louis Napoleon fell, in 1870, all

2 English Liberals rejoiced, and most of them, in their sympathy | for the Republic, expected the relations between the two great free peoples to become exceptionally cordial. Nor did the English Tories show any disposition to regard a republic with dislike. Nevertheless, we perceived, rather more than twenty years ago, signs of hostility in the French Press and Chambers, and thenceforward occasions for diplomatic disputes between the two Governments seemed to multiply. These signs of dislike became more patent, these occasions of friction grew more frequent, after British troops were landed in Egypt to re-establish the authority of the Khedive, in 1882. England had invited France to join her in the occupation

3 and France had refused, so that the mere entrance of a British force could not be | complained of. But England, which has declared that she did not mean or wish to continue to occupy Egypt, found herself unable to withdraw, because withdrawal would have resulted in a fresh collapse of the Egyptian Government. France has resented her continued presence on the Nile, though the fact that a great part of the Egyptian debt is held by French investors is supposed to have had the effect of checking French pressure for England's withdrawal. Ever since 1882 Egyptian affairs have been an unceasing source of friction between the two countries; but British Ministries, even those most anxious to live on good terms with France,

4 have never been able to devise a plan under which our | troops could be removed without the risk of plunging Egypt into anarchy. The only exception was in 1887, when Lord Salisbury put forward a scheme to be embodied in a convention with the Sultan; but the French Government opposed it and it was never ratified.

Meanwhile fresh difficulties arose with France in other quarters. What has been called "the race for Africa" began between four great Powers — Germany, France, Italy, and Britain. The success of Britain in establishing colonies, many of which have had a splendid development, had stimulated the other three nations to acquire colonial territories; and, as Africa was almost the only part of the world left unappropriated, it was in Africa that

5 the competition | for territory became most strenuous. As the unappropriated parts of that continent were all within the tropics, and nearly all unfit for European settlement, their value, even for purposes of trade, is vastly inferior to the value of temperate regions, and is in some cases most problematical. Nevertheless, the four Powers pressed in, each stimulated by the example of the other, and in several places the interests, or claims, of Britain and France came into collision. This story is too long and too intricate to be told here. Suffice it to say that the position became, from 1894 onward, very strained in West Africa, especially in the basin of

6 the Niger, and was with difficulty adjusted by | an agreement concluded in the summer of 1898. The annexation by France of Madagascar and the imposition of a high protective tariff there, in derogation of the treaties under which England had enjoyed a large share of the trade of the island, furnished another ground of dispute which has not yet been settled. There were, moreover, controversies over Siam, where France has extended her dominion; and there have quite recently been controversies over trade interests and railways in China.

I will not attempt to determine the merits of each of these numerous quarrels, nor would the opinion of an Englishman be deemed impartial, however much he might try to make it so.

7 The broad result has been | that the general sentiment of England, which had for a long time been little affected by these disputes, and had, indeed, given little attention to them, began, about four or five years ago, to be seriously stirred. Those who watched the course of events closely knew that what seemed to be the unfriendly attitude of France was not due to any general unfriendliness of the French nation taken as a whole. In a country like France the conduct of the Government does not necessarily represent the feeling of the people, for it has to regard parliamentary considerations and is liable to be influenced by a "colonial group." Neither

8 does the language of the newspapers represent it. Some of the French | newspapers went great lengths. Many, for instance, attributed the anxiety of England to secure the protection of the Eastern Christians at the time of the massacres of 1895 and 1896 to a selfish desire to gain something for herself in the East, and even accused her of having invented the massacres, or stirred up the troubles, though, of course, nothing in the world vexed and embarrassed the English Government more than the occurrence of those troubles. But everywhere in Europe newspapers find it an easier and more agreeable task to stir up ill-feeling than to allay it. The

9 matter came to a head over the Fashoda incident, last September. In that month the | conquering force of British and Egyptian troops found a small French expedition established at a point on the Upper Nile which the English Government had, more than three years before, declared they would deem it an unfriendly act for France to occupy.

Everybody in America, as well as in Europe, knows what an explosion of English feeling this incident evoked. The vehemence of that explosion, however, was not really due to any hatred of France. It arose from the fact that the English, rightly or wrongly, thought that Lord Salisbury's Government had failed in various parts of the world to duly defend English interests, and that, in particular, too many concessions had been made to France. Things

10 looked very serious. |

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

The obliteration of classes is the war-cry of the social reformer.   For a century or two past men of opposing sentiments and principles, who yet professed to hold dear the betterment of the human race, have been projecting and shaping various schemes which shall accomplish the utmost benefit for mankind, and which shall do away with prevailing evils. Bitterly opposed as they are in all else, this warfare against class distinctions is the one link of connection between the modern socialist and anarchist, and both seem to hold to a glad illusion that if these could be obliterated the social millennium would be here.   To the very existence of classes seems to be attributed all the oppression and all the injustice and all the suffering that exist in the world.   Poverty is supposed to exist by reason of the centralisation

1   of riches into the hands of a class ; ignorance | and crime because the poor and helpless are crushed down by the weight of their social superiors ; cruelty and dishonesty thrive because the class in power can defy the law.   Such are the arguments advanced by those who make unavailing protest against existing conditions, and who have much of reason on their side, lacking only the balance-wheel of discerning judgment.

Closer students of the world's affairs perceive that there is to-day an extraordinary change taking place in social organization, and one which is advancing with marvellous rapidity. Wealth is buying out aristocracy the world over, with love sometimes appearing as a timid second factor in the bargain.   Even royalty is succumbing to the Midas-like touch.   Old names and old titles must be supported, and old wealth has a troublesome propensity for vanishing into thin air.   Even thrones require the support of gold to prop their tottering foundations.

2   This | may be regarded as the war of a class upon a class, for the claims to social preferment which formerly rested upon the audacious deed of some barbarian ancestor or upon the bar sinister in lineage are being exchanged for the more substantial if less picturesque advantages of acquired wealth.   And, as wealth is a prize open to every competitor in life's race, and one quite as likely to be won by the hod-carrier or the green-grocer's son, it follows that brickmasons and soapmakers and traders generally are ascending to the highest rank in the social scale.

Now, while individual exertion and individual ambition are on the one hand tending to the centralisation of wealth in the hands of a few, enlightened public opinion, on the other, is advancing toward an equalisation of opportunities in all civilised States.   In time it is probable

3   that all freeborn children in | a progressive land will be given equal educational opportunities, and that society or the Government will see to it that all are properly clothed and fed, and have every advantage for a normal physical development.   This once accomplished, whatever the form of government or the system of the distribution of products, each generation will stand so nearly equal in the race for material benefits that it is rational to assume extreme distinctions of a material kind will disappear, and that all men and women will be sufficiently independent and relieved from the most crushing necessities of existence to be enabled to follow in some degree their individual tastes and to develop their best capacities.   Should this happy day arrive, instead of the obliteration of class lines it is safe to predict a re-creation of such distinctions upon more enduring principles than have ever before been recognised.   The man

4   who loves | a picture or who can paint one is not going to choose for his associate the man who builds an engine and whose heart is attuned to the throb of machinery, and the fact that their financial status is essentially the same will only serve to accentuate the difference between them.   The woman who can write a poem or express her sentiments in seven languages is not going to admit her dressmaker, whose heart and soul are absorbed in patterns and fabrics, to a social or intellectual equality.   The people who love to listen to Beethoven's sonatas will not affiliate with the multitude whose ears no amount of ease or prosperity or affluence can educate above the strains of a music hall.

As to the relative superiority of classes in that far-distant day, it is unlikely that society

5   will trouble herself about them any more than she does to-day. |

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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 begun 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 sometime 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.

Some new details of the " Stella " disaster are given in a narrative by Mr. Edward Abinger, a barrister, who was one of the party at luncheon with the captain in the public saloon shortly after one o'clock on the day of the accident. A lady asked, " Is it not

1   dangerous | to go at this speed through the fog ? " and the captain replied, " The man who is now in charge of the vessel can find his way anywhere." " Personally," says Mr. Abinger, " I was somewhat surprised at the great rate of speed at which the vessel was travelling.

2   The whole length | of the ship was vibrating by the action of the engines. Just about this time we struck a thick bank of fog, and the vessel was slowed down to half-speed. The fog became less dense, and we went at full speed ahead again. Shortly afterwards, however, we

3   slowed down | again, and I noticed that the fog had become denser, and that it extended on all sides of us. Yet, in spite of this fact, the vessel was put running at full speed again.

4   Somewhere about four o'clock, as near as I can fix it, when I was standing on | the port side of the vessel, I heard a shout. I ran at once to the taffrail of the port side, and I saw right ahead of us, dead on, a great rock looming out of the fog. I do not think it could have been

5   more than twenty-five | yards ahead of us. At this moment the captain was on the bridge, and he with great promptitude starboarded his helm, and the vessel sheered off at a remarkable angle. I leaned my body across the rail, and thought that we had escaped, but a slight

6   rasping, scraping noise soon | told me that we must have struck on a submerged rock. There was no shock whatever, and no crash. It was as if we had grounded on a sandbank. The vessel's way was not interfered with. She went on as if nothing had happened—never slowed

7   down. The very moment | that the vessel struck the rock I heard the captain cry out, ' Lower the boats away.' This somewhat surprised me, as I did not realise up to that moment that the vessel was doomed. The captain must have realised it immediately. But for this

8   promptitude on his part, in my | opinion, every soul would have been lost, as I judge that not more than seven minutes elapsed between the moment of the' impact and the time that the vessel entirely disappeared. In less than five minutes the davits and main ropes, some of

9   which had to be cut, were cleared. | The vessel had stopped suddenly as if shot, I should think three or four hundred yards away from the spot on which she first struck. The vessel listed right over on the starboard side. . . . I saw Mr. Millis, a confectioner of Oxford

10   Street, take his wife down the gangway." |

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

A party of musicians the other day were discussing the question of the love of music in various members of the animal creation and particularly among snakes. The majority of them denied that snakes in particular had any idea of music, and scouted the thing as absurd and impossible, when one of them offered to relate a story from his own experiences that

1   would be convincing on the point at issue. As he was reputed to be a good story | teller his companions agreed to hear the evidence, however much they might doubt the correctness of his theories.

" Some years ago," said he, " I was the organist in a little country church near the Blue Mountains. The mountains were full of snakes. I used often to go out in the woods and take my cornet along, just to have a little music and practice by myself. One day I was

2   sitting on a log by a spring, playing softly and | hardly thinking what I was doing, when I suddenly saw a giant black snake very close to me coiled up and swaying his head to the rhythm of the tune. I am not afraid of snakes, and knew this one to be as harmless as a kitten, so I was more amused than frightened, and continued to play a variety of airs for him, to see the effect. He appeared to enjoy it immensely, and when I played something lively

3   he | seemed to become almost delirious in his gyrations. I concluded that if he had legs he would surely dance, and as it was his motions were exceedingly graceful and his ideas of time excellent. His eyes shone with the pleasure it was giving him, and his forked tongue fairly seemed to blaze in the ecstasy of his enjoyment. Suddenly I stopped, and he seemed a very

4   picture of sadness and disappointment. He crawled up to me and asked me to | resume just as plainly as if he knew every word in the English language.

" It suddenly occurred to me that it would be an interesting experiment to see if he would follow the music. So I got up, and, playing softly, began to walk away. He followed me at once, and I led him along down to the church. When I unlocked the door he followed me

5   in without hesitation, and came right after me up into the organ-loft. | I then tried him with the organ, and he was even more delighted than with the cornet. Finding that he would never get enough of the music I was obliged at length to drive him away by main force.

" The next day I went into the church to practise and had not been long at it when I heard a rustle on the carpet, and, looking down, there was his snakeship taking it in ; and

6   when I finished I had | to drive him away again. By the next Sunday I had almost forgotten about the incident, when, just as we were in the midst of the second hymn, I suddenly heard a screaming and screeching among the female members of the choir as if some one was scalping them all at once. I looked up just in time to see my friend the snake disappearing with

7   a shower of hymn-books and stools hurled by the male members of the | choir flying after him. However, he escaped and I said nothing about my previous acquaintance with the reptile. You may imagine that it broke up the service for awhile, but finally everything quieted down and went on as usual. After that the snake came again for many weeks every time I practised, but it seems that he had become convinced that it was dangerous when others were

8   present, so he never again entered the church during service, though doubtless he | was listening at a safe point outside.

     " Soon afterward members of the Church reported that they had heard mysterious breathings of the organ at night in passing the church, and inquired whether I was practising. I assured them that I was not. This occurred several times, and as it could not be satisfactorily explained it aroused a deal of comment, and some of the more superstitious began to whisper

9   that the church was haunted, and that the spirit of a | former organist was at the bottom of it. As the mystery was beginning to tell on the nerves of the neighbourhood, as well as on my own, I determined to ferret it out. The music would generally sound as if some one were touching the keys with one finger, although sometimes a number of keys would be depressed simultaneously ; but whenever I entered the church I found no one there. The organ would

10   be open, though I had left it closed." |

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

     Do animals commit suicide? is a question which in its very terms is at once curious and interesting. I am led towards this topic by the appearance in the newspapers of a paragraph which announced the suicide of a dog. The animal is alleged to have held its head under water till it perished, but of the supposed reason for the " rash act " we are left in ignorance. If the dog committed suicide he chose a mode of departing this life which is in tolerably high favour with people who are tired of existence. The whole question which the

1   newspaper | paragraph raises is of deep scientific interest. Let me begin by remarking that we have first of all to be careful in our reading of accounts of such incidents. There may be no intent to exaggerate or misinform, but the interpretation of the affair may be erroneous, apart from actual intention to mislead altogether. I can fancy a dog anxious to recover something from the water groping about with his head below the surface, and succumbing in his determination not to leave the object he is seeking. He perishes in such

2   a case by misadventure, but it might be reported | as one of suicide. I do not offer this theory as an explanation of any case in which a dog has been drowned ; I merely suggest it as an alternative supposition worth examination, and serving as a foil to some of the wonderful stories of dogs we read now and then. My greater difficulty in the way of belief that animals may and do commit suicide is founded on the contention that the idea of self-destruction implies a much higher order of intellect than we can possibly give any animal lower than man the credit for possessing.

3   The motives | which impel man to self-destruction are often highly complex. You may run through the whole gamut of human emotions and passions, from jealousy to despair, and from grief to insanity, without exhausting the causes that lead to suicide. But they are all complex things. Even if it is a fit of ungovernable temper and rage that sends a man to the water, or to poison, that rage has been evolved by circumstances which his brain has had to cope with, unsuccessfully, of course. The mere act of suicide is really the end of a compli-

4   cated series of brain-acts, | thoughts, impulses, call them what you will ; and I contend you do not find adequate provision made for the operation of such causes in the so-called suicide of animals. Still, the topic is a very ancient one. I should at once eliminate from cases of suicide in animals those in which, for example, a dog pines away after the death of its master. That is not suicide at all, and yet I find numerous cases of this kind recorded as acts of self-

5   destruction. The dog dies of grief. He would eat but he cannot, and therefore pines away. |