1904.
NEW ZEALAND.

EDUCATION:
ANNUAL EXAMINATIONS.

[In continuation of E.—1A, 1903.]

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, 1st June, 1904.

I have the honour to report upon the annual examinations for teachers' certificates, and for admission to or promotion in the Civil Service. The examinations were held in January, between the 5th and the 16th days of the month, at the thirteen towns which are the seats of Education Boards, and also at Whangarei, Thames, Tauranga, Gisborne, Palmerston North, Masterton, Westport, Oamaru, and Lawrence.

The number of candidates was 1,407, and of entries 1,427, made up as follows: For the Civil Service Junior Examination, 533; for the Civil Service Senior Examination, 140; for certificate examinations, 748; for drawing only (2 certificated teachers and 4 pupil-teachers), 6. Of the 533 candidates for the Junior Examination 18 entered for the Senior Examination as well, and 1 for certificate examinations; and 1 candidate for the Senior Examination entered for, Class D as well. The number of candidates absent from examination was 90.

The expenses of the examinations amounted to £1,218 4s. 1d., and the fees paid by candidates to £1,142 13s. Printing and clerical work are not included in the account of expenses.

The results of the Civil Service Senior Examination were made known on the 8th February, those of the Junior Examination on the 22nd, and those of the teachers' examinations on the 29th.

Of the 140 Civil Service Senior candidates 54 came up to complete examinations in which they had already been partially successful. In all 38 passed the whole examination, and there were 70 whose work in certain subjects of the examination was accepted by the Department.

The names of 267 of the Civil Service Junior candidates were published in the order of their marks in the *Gazette*, and 266 failed to reach the minimum required, which was 40 per cent. of the possible total.

Of the 4 pupil-teachers who entered under the regulation which allows them to come up for one division of drawing at a time, 3 satisfied the examiners.

At the teachers' examination, 5 were candidates for Class C (University examinations being taken into account), 230 were candidates for the whole examination for Class D, and 157, having been credited with "partial success" for Class D, came up to complete their examination; 226 were candidates for the whole examination for Class E, and 129 came up to complete the examination for that class, and 2 certificated teachers entered for further examination in drawing. There were 145 candidates who had already passed for Class E, and were seeking promotion to Class D; and of those who had not so passed 285 were teachers in the service of the Boards, 218 were pupil-teachers, and 52 were normal-school students in training; while 14 were persons who had ceased to be teachers, pupil-teachers, or normal-school students, and 34 had never sustained any such relation to the public schools.

Of the whole number of 748 candidates, 190 have "passed" (2 for C, 103 for D, and 85 for E), and 185 have achieved "partial success" (2 for C, 71 for D, and 107 for E), while 389, including 64 absentees, have failed to improve their status. As the result of the examination, 114 new certificates have been issued (2 for Class C, 50 for Class D, and 62 for Class E), and 33 certificates of Class E have been raised to Class D.

The examinations for Junior National Scholarships and for Free Places in Secondary Schools were held concurrently with the above-named examinations at the same centres and at eleven other places. Papers were set in English, Arithmetic, Geography, and Drawing, besides a General Paper containing questions in elementary science and history and questions intended to test the candidates' general knowledge, their intelligence, and their powers of observation. The highest percentages of marks gained in the several papers were as follows: English, 85; Arithmetic, 91; Geography, 80; Drawing, 98; General Paper, 86. The highest percentage obtained by any one candidate on the whole examination was 82. The number of candidates for Junior National Scholarships and Free Places was 435, and there were also 126 candidates for Free Places only. The total number of candidates that qualified was 276. The numbers of candidates that qualified in the several Education Districts were as follows: Auckland, 103; Taranaki, 4; Wanganui, 10; Wellington, 34; Hawke's Bay, 18; Marlborough, 6; Nelson, 5; Grey, 1; Westland, 4; North Canterbury, 21; South Canterbury, 7; Otago, 36; Southland, 27.

The following table exhibits some of these statistics :—

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 ...	145	36	...	...	20	...	56
Not passed before—							
Teachers	285	33*	51	1	11†	28	124
Pupil-teachers ...	218	20*	24	3	24‡	52	123
Normal students ...	52	15	..	1	16§	10	42
Retired	14	...	3	...	...	1	4
Outside candidates...	34	1	2	...	2	5	10
Totals ...	748	105	80	5	73	96	359

* Including one for Class C. † Including three who also gain partial pass for Class E. ‡ Including five who also gain partial pass for Class E. § Including two for Class C, and three who also gain partial pass for Class E.

The analysis of the results according to examination centres is as follows :—

Number of Candidates.		Pass for D.	Pass for E.	Pass for E, with Partial Pass for D.	Partial Pass for D.	Partial Pass for E.
I. Candidates for promotion from E to D, 145 :—						
Whangarei	7	..	..	..	..	..
Auckland	45	13	..	..	11	..
Thames	2	..	..	..	..	..
New Plymouth	5	..	..	..	2	..
Wanganui	14	3	..	..	1	..
Palmerston North	10	1	..	..	2	..
Wellington	11	4	..	..	1	..
Masterton	1	..	..	..	1	..
Napier	11	4	..	..	..	..
Gisborne	3	1	..	..	..	..
Blenheim	1	..	..	..	..	..
Nelson	6	3	..	..	..	..
Westport	1	..	..	..	1	..
Greymouth	1	..	..	..	..	..
Hokitika	2	1	..	..	..	..
Christchurch	8	2	..	..	..	..
Timaru	3	..	..	..	..	..
Dunedin	10	2	..	..	1	..
Invercargill	4	2	..	..	..	..
II. Candidates that have not passed before, 602 :—						
(*a.*) Teachers—285 :—						
Whangarei	3	..	1	..	1	..
Auckland	72	5	8	1	4	11
Thames	4	1	2	..	..	..
Tauranga	2	..	1	..	..	..
New Plymouth	9	1	3	..	..	..
Wanganui	6	..	2	..	..	..
Palmerston North	12	..	7	..	..	1
Wellington	27	1	9	..	1	5
Masterton	6	..	1	..	..	..
Napier	6	1	1	..	..	2
Gisborne	1	..	..	..	..	..
Blenheim	7	..	2	..	..	..
Nelson	22	2	1	..	1†	2
Westport	4	..	1	..	1†	..
Greymouth	7	..	1	..	..	1
Hokitika	6	..	1	..	..	2
Christchurch	29	7	2	..	1	1
Timaru	8	3	3	..	..	..
Oamaru	1	..	..	..	..	..
Dunedin	27	12*	2	..	1	2
Invercargill	26	..	3	..	1†	1
(*b.*) Pupil-teachers—218 :—						
Whangarei	2	..	1	..	..	..
Auckland	61	4	2	..	8‡	23
Thames	5	..	..	..	..	1
Tauranga	2	..	..	..	..	1
New Plymouth	8	1	..	..	..	4
Wanganui	6	1	3	..	..	2
Palmerston North	6	..	1	..	..	2
Wellington	47	8*	6	..	6‡	5
Masterton	9	..	2	..	..	4
Napier	21	1	4	1	2	2
Gisborne	7	1	2	1	..	2
Blenheim	1	..	..	..	..	..

* Including one for Class C. † Also gains partial pass for E. ‡ Including one who also gains partial pass for E.

Number of Candidates.		Pass for D.	Pass for E.	Pass for E, with Partial Pass for D.	Partial Pass for D.	Partial Pass for E.
II. Candidates that have not passed before, 602 :—*continued.*						
(*b.*) Pupil-teachers—218 :—*continued.*						
Nelson	7	..	1	..	..	2
Westport	4	..	..	..	1	..
Greymouth	4	..	1	..	..	..
Christchurch	9	4	..	1	3*	..
Timaru	6	..	..	..	1*	1
Dunedin	3	..	..	..	1	1
Invercargill	10	..	1	..	2*	2
(*c.*) Normal-school students—52 :—						
Christchurch	28	6	..	1	9†	7
Timaru	1	..	..	..	..	..
Oamaru	1	..	..	..	..	1
Dunedin	22	9	..	..	7‡	2
(*d.*) Candidates that have retired from the service—14 :—						
Whangarei	1	..	..	..	..	..
Auckland	1	..	1	..	..	..
Wellington	4	..	2	..	..	..
Blenheim	3	..	..	..	..	..
Greymouth	1	..	..	..	..	..
Christchurch	1	..	..	..	..	..
Dunedin	2	..	..	..	..	1
Invercargill	1	..	..	..	..	..
(*e.*) Candidates that have not been in the service—34 :—						
Auckland	10	..	1	..	..	1
Palmerston North	1	..	..	..	..	..
Napier	1	1	..	..	..	..
Blenheim	1	..	1	..	..	..
Nelson	4	..	..	..	..	1
Christchurch	3	..	..	..	..	1
Timaru	3	..	..	..	..	1
Oamaru	2	..	..	..	..	..
Dunedin	5	..	..	..	1	1
Invercargill	4	..	..	..	1	..

* Including one who also gains partial pass for E. † Including two who also gain partial pass for E. ‡ Including two whose work counts for Class C, and one who also gains partial pass for E.

Civil Service Examinations.

Place of Examination.	Senior Examination.						Junior Examination.	
	Number of Candidates	Pass Whole Examination.	Pass in Five Subjects.	Pass in Four Subjects.	Pass in Three Subjects.	Pass in Two Subjects.	Number of Candidates	Pass.
Whangarei	...	...	...	...	...	...	8	5
Auckland	24	9	6	1	...	1	93	46
Thames	3	1	1	...	1	...	21	13
Tauranga	...	...	...	...	...	...	2	...
New Plymouth	3	1	...	...	...	1	13	11
Wanganui	4	...	...	1	...	2	18	7
Palmerston North	...	...	...	...	...	...	8	3
Wellington	54	13	8	12	9	4	70	34
Masterton	1	...	...	...	...	...	18	10
Napier	6	2	...	...	2	1	27	18
Gisborne	1	...	...	...	1	...	1	1
Blenheim	1	...	1	...	...	...	19	3
Nelson	1	1	...	...	...	...	19	9
Westport	2	...	...	...	1	...	10	5
Greymouth	2	...	1	...	..	1	16	3
Hokitika	3	...	1	...	...	1	12	8
Christchurch	17	7	2	2	1	2	46	25
Timaru	3	1	...	...	...	...	17	9
Oamaru	...	...	...	...	...	...	6	4
Dunedin	10	3	1	...	2	...	62	32
Lawrence	1	...	...	...	...	...	13	8
Invercargill	4	...	...	2	...	1	34	14
Totals	140	38	21	18	17	14	533	268

Appended to this report are lists of the successful and partially successful candidates, a list of the examiners, and a set of the examination papers, including those set for Junior National Scholarships and for free places in secondary schools.

I have, &c.,

George Hogben,

Inspector-General of Schools.

LIST OF EXAMINERS.

Adams, J. C.
Bakewell, Frederic H., M.A.
Barron, Clarke C. N.
Benham, William B., M.A., D.Sc., Professor in the University of Otago
Blunt, Thomas G. R., M.A., Professor in Canterbury College
Brown, F. D., M.A., Professor in Auckland University College
Brown, John, M.A., Professor in Victoria College
Browne, Montague H.
Chilton, Charles, M.A., D.Sc., Professor in Canterbury College
Corfe, Charles C., M.A.
Dinwiddie, William
Fox, Morris
Gammell, John
Gellatly, Alexander
Gilray, Thomas, M.A., Professor in the University of Otago
Grossman, Mrs. Edith H., M.A.
Harkness, John, M.A.
Herdman-Smith, R.
Hight, James, M.A., Lecturer in Canterbury College
Hudson, William B.
Hutton, Frederick W., F.R.S., Professor in Canterbury College
Hyde, Frank
Isaac, Edmund C.
Lawrell, Miss Maud E., M.A.
Maclaurin, Richard C., M.A., Professor in Victoria College
Marchant, Miss Maria E. A., M.A.
Marshall, P., M.A., D.Sc., Professor in the University of Otago
Meek, Alfred R., M.A., LL.B.
Merton, A. J.
Merton, Mrs. Gertrude H.
Mulgan, Edward K., M.A.
Rice, Mrs. Emily
Richardson, Josephus H.
Richmond, Maurice W., B.Sc., Lecturer in Victoria College
Rowe, Thomas W., M.A.
Segar, Hugh W., M.A., Professor in Auckland University College
Smith, Percy
Vereker-Bindon, William H., M.A.
Wall, Arnold, M.A., Professor in Canterbury College
White, Rev. William, M.A.
Wilson, Kenneth, M.A.

EXAMINATION LISTS.

TEACHERS' EXAMINATION, 1904.

I.—PASSED FOR CLASS C.

(University status being taken into account.)

Dare, Olive Janet Moir	Dunedin
Wedde, Elizabeth Freda	Wellington

PASSED FOR CLASS D.

Acheson, Catherine Edith Ann	Invercargill
Aiken, Janet Mary	Christchurch
Alexander, Janetta Crawford	Dunedin
Anderson, Annie Katharine	Dunedin
Archibald, Margaret Reid	Auckland
Arcus, Lawrence Herbert	Wellington
Atkins, Harry	Auckland
Bannerman, Herbert Douglas	Dunedin
Benson, Herbert Norman	Napier
Billens, Mabel Ellis	Palmerston N.
Bissett, Elizabeth Alice	Christchurch
Black, Grace	Gisborne
Bourke, Mary	Auckland
Bretherton, Arthur Charles	Wellington
Broun, James Scotter	Auckland
Brown, Jonathan	Napier
Burns, William George	Christchurch
Butler, Phoebe	Christchurch
Campbell, Alice Eileen	Timaru
Campbell, Fernly Charlwood	Wanganui
Clemance, Winifred Mary	New Plymouth
Cook, Jessie	Napier
Cooke, Alice Bertha	Christchurch
Cooney, Hugh Owen	Auckland
Cooper, Charles Wallace	Auckland
Cowie, Elizabeth Curle	Dunedin
Cowles, Sarah Alice	Nelson
Cox, Annie Hudson	Dunedin
Croft, Ivy Muriel	Dunedin
Cruickshank, Jemima	Auckland
Cumming, Kathleen Susan	Auckland
Davidson, William	Napier
Davie, Peter Cousin	Timaru
Downard, Frederick Newman Reeve	Auckland
Driller, William James	Gisborne
Dugdale, Matilda Cargill	Dunedin
Elmslie, Bessie Graham	Wanganui
Faulks, Kate	Dunedin
Feist, Hannah Elizabeth	Wellington
Finlayson, Catherine Helen	Christchurch
Gaudin, Emma Charlotte	Wellington
Gibson, Fanny	Christchurch
Gibson, Henry Thomas	Auckland
Gilbert, Mabel Clara	Nelson
Gillespie, Hilda Winifred	Christchurch
Gilmor, Edward John	Nelson
Graham, Jane Stevenson Barr	Dunedin
Gray, Georgina	Napier
Green, Samuel	Auckland
Griffiths, John Haldane	Wellington
Hall-Jones, Harriet	Timaru
Harvey, John Hooper	Auckland
Hodgson, Mabel Edith	Christchurch
Hoggins, Mary Florence	Christchurch
Honour, Lizzie Esther	Wellington
Hopcraft, Flora Livingstone	Dunedin
Hughes, Wilfrid Lawson	Auckland
Hutton, James	Wellington
Hutton, Robert Guthrie	Auckland
Jamieson, Amy Frances	Hokitika
Johnson, Joseph Benjamin	Auckland
Kenny, Arthur Alphonso	Auckland
Keys, May	Dunedin
Lomas, Edmund Kerry	Dunedin
Longuet, Louis Philip	Christchurch
Lothian, Jeanie Marion	Dunedin
McCutcheon, Eccles Alexander	Napier
McGettrick, Anne Gertrude	Wanganui
McGregor, Isabella	Dunedin
Mackay, Thomas Etheridge Alexander	Whangarei
McKenzie, Helen	Dunedin
Magill, Elizabeth	Napier
Mahony, Harriet Elizabeth	Thames
Mason, Francis Augustus	Wellington
Milne, Euphemia	Christchurch
Morgan, Richard William	Christchurch
Murray, William Tullibardine	Wellington
Nichol, Mary McKendric	Christchurch
Parkin, Emily Maude	Christchurch
Paterson, Jessie	Dunedin
Prebble, Helen Eveline	Christchurch
Rankin, Elizabeth Ellen	Christchurch
Reid, Alice Marion	Invercargill
Reilly, Louis Gilbert	Dunedin
Roache, Patrick Henry	Wanganui
Roberts, Charles	Auckland
Robson, John Templeton	Wanganui
Rogers, Marmaduke	Nelson

Smith, Gertrude Isabel	Auckland
Stagpoole, Thomas	Wellington
Stratton, Florence Grace	Dunedin
Thomas, Ethel Beatrice	Christchurch
Thomas, Joseph Wilkins	New Plymouth
Trevena, Albert James	Dunedin
Turnbull, Katharine Agnes	Auckland
Vaughan, Frederick Thomas	Wellington
Waddingham, Florence Mary	Auckland
Walker, Clarice Agnes Redpath	Dunedin
Walton, Margaret Ann Selina	Dunedin
Wells, Florence Mildred	Auckland
Whitaker, Kathleen Margaret	Auckland
White, Fanny	Dunedin
Williamson, Amy Charlotte	Wellington
Wood, Elizabeth Aner	Christchurch
Zohrab, Clara Melita Holmwood	Nelson

PASSED FOR CLASS E.

Allen, Harriette Mary	Auckland
Angove, Alice Hilda	Auckland
Atkins, Marion Shennan	Wellington
Barrett, Henry Robert	Wellington
Bary, Edward	Blenheim
Bell, Marion Menary	Whangarei
Benner, Maud Charlotte	Tauranga
Bocock, James Henry	Auckland
Bradley, Julia Mary	Palmerston N.
Bray, Hinemoa Francis	Masterton
Bryant, Ethel Maude	Christchurch
Burton, Percy Robert	Auckland
Byers, Mary Hall	Timaru
Cameron, Lilly Isabella	Wellington
Carswell, Helen	Invercargill
Carter, Ethel Kate	Wellington
Catran, James George	Thames
Christensen, Laura Dorthea	Palmerston N.
Downard, Edith Jane Rintoul	Auckland
Dudding, Katherine	Auckland
Dynan, Mary	Wellington
Ellis, Leonard Richmond	Timaru
Fanning, James Francis	Wellington
Fawbert, Emma Louisa	Wellington
Fraser, Mary	Hokitika
Garland, Frank William	Auckland
Gavey, Francis	Invercargill
Gifford, Margaret Ann	Invercargill
Gordon, Elizabeth	Invercargill
Govan, Frances	Palmerston N.
Halley, Isabella Milne	Wellington
Hannay, Isabella Mildred Wiffen	Napier
Harrison, Robert	Wellington
Hayes, Frances Ann	Napier
Henn, Elvira Isabella	Wanganui
Holdaway, Helen Frances	Nelson
Ingerson, William Laurie	Auckland
Ingram, Dorothea Robina	Auckland
James, Louisa Lillian	Wellington
Jannings, Frederick Charles	Palmerston N.
Jeffries, Emily Veronica	Blenheim
Joll, Beatrice Mary	Napier
Jones, Annie Hunter	Gisborne
Joyce, Amie Elizabeth	Auckland
King, Margaret	Auckland
King, Thyra Mabel	Napier
Lassen, Mary	Palmerston N.
Lewis, Annie Marie Leach	Greymouth
Long, Edgar Robert	Whangarei
McCallum, Adina	Auckland
McCaul, Enid Isabella	Wellington
McClure, Jane Evelyn	Gisborne
Macey, Nellie Marie Stuart	Blenheim
McIlraith, Alice Emma	Christchurch
McIvor, Georgina	New Plymouth
McKeown, Emily Maria	Napier
Marriott, William George	Timaru
Martin, Frederick William	Wanganui
Mead, Beatrix	New Plymouth
Meads, Zenobia	Wanganui
Moore, Minnie Louise	Auckland
Morice, George William	Gisborne
Noble, John	Greymouth
O'Connell, Catherine	Dunedin
Osborne-Gibbes, Hinemarama	Nelson
Pearce, Irene	Wellington
Petrie, Alice	Masterton
Pickett, James Andrew	Thames
Poole, Samuel Joseph	Wanganui
Potts, Mary Isabel	New Plymouth
Powell, Gertrude Ethel	Palmerston N.
Prootor, Francis Joseph	Wellington
Renai, Emma Iola	Wellington
Robinson, Lillie Isabel Ferguson	Masterton
Shine, Annie	Wellington
Small, Gilbert Johnstone	Wanganui
Soundy, Arthur Walden	Wellington
Stormont, Florence Maude	Wellington
Ullmer, Frederica	Westport
Voysey, Alice	Palmerston N.
Watson, Mary Helen Cranston	Christchurch
Wellwood, Susan Kathleen	Napier
Wills, Kathleen Pendower	Christchurch
Woodhill, Ellen	Dunedin
Yortt, Hilda Maria	Palmerston N.

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

(University status being taken into account.)

Reid, Jessie Begg	Dunedin
Strachan, James Ernest	Dunedin

OBTAINED "PARTIAL PASS" FOR CLASS D.

Anderson, Helen Maud	Christchurch
Aschman, Beena Salek	Christchurch
Ash, Harriet Emily	Dunedin
Ball, Alice Annie	Invercargill
Bell, Alexander	Auckland
Blyth, Thomas Arthur	Wanganui
Brockett, Frederick Charles	Wellington
Bullians, Andrew	Whangarei
Castle, John George Thomas	Wellington
Cato, Eva Priscilla	Auckland
Coad, Nellie Euphemia	Wellington
Compton, Kate Hilda	Wellington
Cook, Eleanor Nugent	Wellington
Craik, Mabel Rose Kathleen	Dunedin
Dawe, Constance Gordon	Christchurch
Doubleday, William Henry	Christchurch
Dowding, Frederick Bailey	Auckland
Drakley, May Elizabeth	Dunedin
Easdale, Mildred Janet Newton	Nelson
Edkins, Constance Gertrude	Christchurch
Garland, Frank William	Auckland
Garrey, Margaret	Dunedin
Gawn, Elizabeth Clarke	Dunedin
Gilmour, William Orr	Timaru
Gough, James Thomas	Auckland
Gray, Catherine	Masterton
Hall, Laura Louise	Auckland
Hamilton, Lucy	Auckland
Harrington, Ethel	Invercargill
Hickey, Mary Margaret	Wellington
Hitchcock, Margaret	Wellington
Hook, Percy John	Auckland
Hurley, Irene Norma	Dunedin
Jamieson, Margaret	Palmerston N.
Josephson, Bertha Magdalene	Westport
Josephson, Gertrude Ellen	Westport
Judkins, William Edwin	Auckland
Kean, Euphemia Ruby	Wellington
King, Thyra Mabel	Napier
Leech, Joshua Smith	Auckland
Lewis, Percy Goldsmith	Auckland
Lind, Madeline	Invercargill
McElwain, Olive Noel	Auckland
McElwain, Ruby Marie	Auckland
Macgregor, Mabel Septima	Christchurch
McKenzie, Ida Maude	Invercargill
Macnamara, Annie Mary Belle	Auckland
Meiklejohn, Lemuel Sydney Arnott	Auckland
Metherell, Florence Rose Sophia	Christchurch
Morice, George William	Gisborne
Morland, Thomas Arthur	Christchurch
North, Robert Henry	Christchurch
Paterson, Daisy Edwina	Napier
Pearce, Elsie Minter	New Plymouth
Peebles, Madeline Gempton	Christchurch
Pole, Leonard Ernest	Palmerston N.
Power, Edward Arthur	Auckland
Rauzi, Alice Frances Cecilia	Napier
Roche, Emily	Auckland
Ross, Frances Dagmar	Dunedin
Russell, Magdalen Laura	Auckland
Scott, Charles Edward	Auckland
Scott, Robert Charles	Dunedin
Shannahan, Margaret Agnes	Auckland
Slocombe, Mary Annie	Christchurch
Slowey, Teresa Mary	Westport
Squire, Donald Stanley Byron	Auckland
Turbott, Thomas	Auckland
Turner, Grace	Timaru
Waddell, William Herbert	Auckland
Walker, Hilda Mabel	Auckland

Watson, Mary Helen Cranston	Christchurch
Williams, Florence	Christchurch
Wills, Kathleen Pendower	Christchurch
Wilson, James Reid	Dunedin
Wright, Jane	New Plymouth

OBTAINED "PARTIAL PASS" FOR CLASS E.

Alexander, Mary	Auckland
Anderson, Helen Maud	Christchurch
Anderson, Roy	Wellington
Bairstow, Jane	Masterton
Ball, Alice Annie	Invercargill
Banks, Adeline Sarah	Wellington
Barr, Muriel Lillian	Auckland
Battersby, Eleanor Beatrice	Auckland
Bayliss, Louisa Ethel	Auckland
Beatty, Annie	Auckland
Becroft, Florence Ivy Irlam	Auckland
Bell, Lucy	Thames
Braithwaite, Frederick Christopher	Auckland
Bryan, Edith Elizabeth	Wellington
Burnley, Alice Maud	Wellington
Bussell, Lilian Elizabeth	Christchurch
Byers, Evaline Hannah Forrester	Oamaru
Campbell, Mary Innis	Auckland
Carter, Lucy Ann	Timaru
Clark, Ada	Auckland
Cliffe, Albert Stephen	Auckland
Coleman, Frances	Christchurch
Comerford, Florence Louise	Christchurch
Crawford, Mary Elizabeth	New Plymouth
Creighton, Anna Maria Josephine	Auckland
Crosby, Edward	Auckland
Cussen, Kathleen	Gisborne
Cussen, Mary Estelle	Gisborne
Day, Florence Mabel	Auckland
Doubleday, William Henry	Christchurch
Downing, Mary Isabelle Catherine	Greymouth
Dunlop, Archibald	Dunedin
Eagar, Edward Fitzgerald	Wanganui
Earle, Jessie	Auckland
Easdale, Mildred Janet Newton	Nelson
Edgerly, William Walter	Auckland
Edwards, Dorothy Louisa	Wellington
Edwards, Mary Penelope	Nelson
Eyes, Itta Lucinda	Christchurch
Eairbairn, Williamina Sangster	Invercargill
Ferguson, Evelyn Mary Constance	Auckland
Fuller, Mary Maud	Auckland
Griffiths, Wilhelmina	Blenheim
Hanron, Alice	Nelson
Hansard, George Albert	Dunedin
Hardy, Helena Harriet	Auckland
Hardy, Margaret Mary	Tauranga
Harrington, Ethel	Invercargill
Harris, Norman Richard	Auckland
Heighway, Emma Jessie	Napier
Henderson, Alexander	Timaru
Hill, Ethel Ilma	Nelson
Hitchcock, Margaret	Wellington
Hogg, Ellen Catherine	Masterton
Ingram, Charlotte Caroline	Dunedin
Iorns, Olive Evelyn	Masterton
Irwin, Elizabeth Tweed Wilson	Hokitika
Just, Leonie Carine Bertha	Christchurch
Keir, Jessie Ann	Christchurch
Kidson, George Rudal	Nelson
Lambert, Alice Gertrude Annie	Wellington
Lynch, Margaret Kate	Wellington
McCowan, Margaret	Auckland
McElwain, Ruby Marie	Auckland
Macgregor, Mabel Septima	Christchurch
McKay, Annie	Invercargill
Main, Agnes	Dunedin
Marryatt, Ernest	Dunedin
Matthews, Adelina Rita	Auckland
Maxwell, Barbara	Christchurch
Melhop, Frank George	Invercargill
Millar, Marie Annie	Christchurch
Miller, Gertrude Mabel	Wellington
Muir, Margaret Murdoch	Auckland
Murphy, Ivy Alicia	Christchurch
Myles, Alice	Auckland
Nixon, Eva Camellia	New Plymouth
Piercy, Florence Marion Sina	Wanganui
Platts, Lilian Nevill Clemison	Dunedin
Powell, Ada Marianne	New Plymouth
Ramson, May	Auckland
Reid, Emily Mary	Auckland
Rogers, Cornelius John	Auckland
Ross, Frances Dagmar	Dunedin
Rowe, Adrian Manfred	Auckland
Russell, Lily	Napier
Shaw, Ada Pearl Muriel	Napier
Sim, Jane Cathcart	Dunedin
Slowey, Teresa Mary	Westport
Smith, Louise	Masterton
Soundy, Carrie Audley	Napier
Speight, Mary Violet	Auckland
Stace, Myrtle Amelia	Palmerston N.
Stanton, Alice Jane	Wellington
Stewart, Lily	New Plymouth
Stewart, Mary Alexandra	Auckland
Stone, Alfred Ernest	Auckland
Synnott, Mabel Alice	Palmerston N.
Thompson, Amelia	Wellington
Thompson, Lydia Constance	Palmerston N.
Tilly, Maggie	Auckland
Turner, Grace	Timaru
Upton, Frederick George	Auckland
Whelan, Violet	Nelson
Willetts, Mary	Hokitika
Wilson, Frank Reginald	Auckland
Wootten, Jessie Constance	Auckland
Worrall, Gertrude Marion	Auckland

III.—PRIZES.

Experimental Science, Class D paper—
Strachan, James Ernest, Dunedin, first prize
Lomas, Edmund Kerry, Dunedin, second prize
Scott, Robert Charles, Dunedin, third prize

Drawing—
Griffiths, John Haldane, Wellington, first prize
Burnley, Alice Maud, Wellington, second prize
Tilly, Maggie, Auckland, third prize

IV.—SPECIAL MENTION.

Ash, Harriet Emily, Dunedin, needlework and English Class D
Bayliss, Louisa Ethel, Auckland, geography, Class E
Bell, Lucy, Thames, domestic economy
Benson, Herbert Norman, Napier, biology
Bradley, Julia Mary, Palmerston North, domestic economy
Brown, Jonathan, Napier, history, Class D
Bryan, Edith Elizabeth, Wellington, English, Class E
Clark, Ada, Auckland, domestic economy and history, Class E
Cumming, Kathleen Susan, Auckland, agriculture, Class D
Curteis, William Arthur, Palmerston North, agriculture, Class D
Cussen, Kathleen, Gisborne, agriculture, Class E
Cussen, Mary Estelle, Gisborne, English, Class E
Dowding, Frederick Bailey, Auckland, biology
Eyes, Itta Lucinda, Christchurch, needlework
Fuller, Mary Maud, Auckland, geography, Class E
Garrey, Margaret, Dunedin, needlework
Garrett, Frances Jane, Auckland, agriculture, Class E
Gilmor, Edward John, Nelson, arithmetic, Class D
Harris, Norman Richard, Auckland, music
Hook, Percy John, Auckland, agriculture, Class D
King, Thyra Mabel, Napier, agriculture, Class D
Lewis, Percy Goldsmith, Auckland, Latin
Lomas, Edmund Kerry, Dunedin, school management
Martin, Frederick William, Wanganui, arithmetic, Class E
Miller, Gertrude Mabel, Wellington, history, Class E
Neal, Catherine Maria, Napier, domestic economy
Peebles, Madeline Gempton, Christchurch, Latin and algebra
Powell, Ada Marianne, New Plymouth, school management
Reid, Emily Mary, Auckland, domestic economy
Rogers, Cornelius John, Auckland, arithmetic, Class E
Sim, Jane Cathcart, Dunedin, music
Stewart, Lily, New Plymouth, school management and geography, Class E
Strachan, James Ernest, Dunedin, experimental science, Class D
Turner, Grace, Timaru, algebra
Williams, Florence, Christchurch, geography and history, Class D
Wootten, Jessie Constance, Auckland, agriculture, Class E.

Civil Service Senior Examination.

List of Passes.

Candidate.	Examination Centre.
Barron, Andrew	Timaru.
Beasley, Thomas Hayes Noble	Wellington
Bridson, Mignonette Alice	Wellington
Butler, Donald	Christchurch
Cameron, William Alfred	Wellington
Dawson, John	Napier
Douglas, Noel McAlpine	Christchurch
Drysdale, Margaret Jane	Dunedin
Dugleby, Ina Burnman	Napier
Dykes, Robert Preshaw	Wellington
Esdaile, Esmond Hamilton	Christchurch
Eyre, Charles Oswald	Auckland
Frethey, Walter Knight	Wellington
FitzGerald, John	Christchurch
Johnson, John	Wellington
Lawrence, Frederick William	Christchurch
McIntosh, Gordon	Auckland
McMurrich, Duncan Augustine	Wellington
McNair, John	Christchurch
Mosley, Edward Darker	Dunedin
Norris, John	Christchurch
Oliver, Walter Reginald Brook	Auckland
Osborne, Gordon Leslie	Nelson
Paul, Alexander	Wellington
Potter, Gertrude Amy	Auckland
Prichard, George Pollard	Wellington
Purves, Thomas Burton	Dunedin
Reichel, Louis Tasman	Wellington
Stewart, Wallace	Auckland
Stewart, William	New Plymouth
Taylor, Fanny Jewell	Thames
Thompson, James Frederick	Auckland
Vickerman, Francis Wynon	Wellington
Wall, William Charles	Auckland
Watkinson, Harold	Auckland
West, Percy Midgley	Auckland
White, Hedley	Wellington
Wilkes, Edith Ellen	Wellington

Civil Service Junior Examination, 1904.

	Candidate.	Examination Centre.
1.	Evans, Sidney Theodore	Auckland
2.	Drysdale, Margaret Jane	Dunedin
3.	Griffin, Isabella Rachel	Christchurch
4.	Cox, Maude Emily	Dunedin
5.	Watkinson, Harold	Auckland
6.	Grant, Clara Donaldson	Auckland
7.	Mellsop, Winifred Lascelles Jenner	Auckland
8.	Good, Edwin Dudley	Auckland
9.	Johnstone, Ivy Maitland	Thames
10.	Johnson, Thomas William James	Thames
11.	Adams, Emily Muriel	Auckland
	Jamieson, Hannah Stewart	Invercargill
13.	Dugleby, Ina Burnman	Napier
	Madden, Ida Lillian	Auckland
15.	Warren, Jessie Esther	Auckland
16.	Edenborough, Grace Fenwick	Auckland
	Taylor, Fanny Jewell	Thames
18.	Stewart, Wallace	Auckland
19.	Caverhill, Eileen Isobel	Christchurch
20.	Olsen, Robert Alexander	Dunedin
21.	Calder, Ernest Henry	Dunedin
22.	Craig, John Alexander	Invercargill
23.	Stitt, Alexander William	Westport
24.	Brodie, Archibald Douglas	Wanganui
25.	Rundle, James Edward	Napier
26.	Alderton, George Edwin Lisle	Whangarei
27.	Bertinshaw, George James	Wellington
	Butcher, David Henry	Oamaru
29.	Morton, Lucy Sandford	Dunedin
30.	Schramm, Frederick William	Hokitika
31.	Moore, Minnie Madeleine	Hokitika
32.	Rossbotham, Michael Dempsey	Dunedin
33.	Wright, Norman Frederick	Thames
34.	Low, James Cowan	Dunedin
	McKay, Mary Hilda	Dunedin
36.	Lewis, Walter Henry Styring	New Plymouth
37.	Hind, Edith Miriam	Wellington
38.	Pearce, Mary Elizabeth	Dunedin
39.	Hyams, Victor	Wellington
40.	Carter, Henrietta Mary	Whangarei
41.	Shanahan, Walter Edmond	Auckland
	Tavendale, Julia	Westport
43.	Evans, Daisy Alice Mary	Timaru
	Hill, Reginald Bernard	Wellington
	MacMorran, Robert Glen	Wellington
46.	Gray, Robert James	Lawrence
	Hassall, Emily Maria	Christchurch
	Hewitt, William Collingbourne	Napier
49.	Amodeo, Peter Paul Justin	Auckland
	Boyce, Thomas	Wellington
	Brown, Jane Rosamond	Hokitika
	Carver, Charles William	Napier
53.	Watson, Donald	Thames
54.	Hunt, Florence Maud	Timaru
55.	Brooke, Charles Stevens	Christchurch
56.	Armstrong, Mary Conboy	Masterton
	Cormack, Isabella	Lawrence
58.	Orr, John Alexander	Hokitika
59.	McKechnie, Bertha Eliza Miles	Napier
60.	Long, Mary Ann	Dunedin
61.	Palmer, Constance Minnie	Nelson
62.	Lyders, Marie Johanne	Dunedin
63.	Windsor, Ellen	Napier
64.	Dawson, Herbert Hay	Wellington
65.	Seddon, Herbert Robert	Auckland
66.	Chesterman, Herbert	Hokitika
67.	Gray, William Moody	Timaru
68.	Binsted, Henry	Auckland
	McIntosh, Margaret Eliza	Lawrence
	Whitehead, Stanley	Thames
71.	Hogben, George McLachlan	Wellington
	Russell, George John	New Plymouth
73.	Anderson, Aieleen Mary	Thames
	Richardson, Oswald Maurice Guildford	Wellington
75.	Bentley, Ina Adelaide	Wellington
	Spiller, Leonard	Christchurch
77.	Pearce, Philip George	Auckland
78.	Fraher, James Joseph	Greymouth
79.	Forbes, Gordon	Christchurch
80.	Danby, Gertrude Amy	Thames
	Ffitch, Harry Herbert	Christchurch
	Goulding, Robert Thomson	Napier
83.	Thorpe, Arthur Dumville	Wanganui
84.	Sinel, Roy	Auckland
85.	Smith, George Corser	Wellington
86.	Alexander, Ruby Evelyn Ellen	Wellington
	Sapsford, Ada Violet	Christchurch
88.	Fisher, Jessie	Dunedin
	Melody, William John	Wanganui
90.	Cameron, Hannah Eleanor	Whangarei
91.	Clark, Edwin	Thames
92.	Ferguson, Minnie Logan	Dunedin
	Jamieson, Violet Annie	Invercargill
94.	Jacobs, Viva Phoebe	Dunedin
	Nichol, James Edmond	Dunedin
96.	Law, Euphemia Ethel	Wellington
	Thorpe, Richard Dumville	Wanganui
98.	Toms, Ernest	Palmerston North
99.	Kelly, Bertie Fleming	Wellington
100.	Clark, Stanley Owen	Auckland
	O'Shea, Mary	Dunedin
102.	Broadmore, Harry William	New Plymouth
	Forgie, Uriah Alexander	Auckland
104.	Goldenstedt, Paul	Auckland
	Tanner, George Harold Augustus	Auckland
106.	O'Brien, Morgan Cyprian Mc-Mahon	Auckland
107.	Venning, Francis Thomas	Timaru
108.	Cottrell, Horace Spence	Napier
109.	Wilkie, Frederick Kraeft	Napier
110.	Dobbie, Arthur Evan	Napier
111.	McClune, James Robert	Auckland
112.	Heenan, Joseph William Allan	Wellington
	Iorns, Ivy Phoebe	Masterton
114.	Rowley, Ruby Adeline	Christchurch
115.	Renall, Olive Emily	Masterton
116.	Fisher, Selina	Dunedin
117.	Taylor, Rose Alice	Westport
118.	Ford, Jane Spratt	Dunedin
	Latham, Maggie	Invercargill
120.	Matthews, Charles Henry	Wellington
121.	Downard, Samuel Charles Gower	Auckland
122.	Hall-Jones, William	Timaru
	Wakelin, Roland Shakespeare	Wellington
124.	Curham, Anna Alice	Thames
	Jennings, Robert	Invercargill
	Taylor, Charles Edward	Wanganui
127.	Kirkpatrick, Robert Duke	Lawrence
	Lawrey, Albert Charles	Christchurch

	Candidate.	Examination Centre.
129.	McGuire, May Elizabeth	Auckland.
130.	Cameron, Thomas William	Whangarei.
	Hindmarsh, Adelaide Barbara	Napier.
	Mikkelsen, Thomas Christian	Auckland.
	Stewart, May Violet	Thames.
	Wilson, Henry Herbert	Timaru.
135.	Wardrop, Charles Laurence	Wellington.
136.	Campbell, Olive May	Auckland.
137.	Miller, Jane Bell	Invercargill.
138.	Teychenné, Annie Winnifred	Napier.
139.	Daniell, Leonard Thomas	Masterton.
	Pattle, Kate Alice	Dunedin.
141.	Williamson, George Buchanan	Wellington.
142.	Dromgool, Cecilia Rose	Christchurch.
	Flyger, Stella Dale	Auckland.
144.	Du Vall, Daniel Henry Verner	Auckland.
	Jordan, James Garfield	Nelson.
146.	Marbrook, Harry Latchford	Napier.
	Mushet, Francis John	Auckland.
148.	Bridge, Alice Maud	Auckland.
149.	Lane, James Paton	Timaru.
150.	Eslick, Violet Irene	Auckland.
	Schmidt, Joseph George	Wellington.
152.	Dunn, John Gilman Sharp	Oamaru.
153.	Little, Thomas	Auckland.
	Rhodes, Susy Victoria	Dunedin.
155.	Colmer, Frederick James	Auckland.
156.	Miller, George Ernest	Hokitika.
	Webley, Norman	Nelson.
158.	Douglas, Margueretta Jessie Hope	Invercargill.
159.	Mahony, Mary Kathleen	Napier.
	Ziegler, John Ludwig	Greymouth.
161.	Dwyer, Evelyn Grace	Hokitika.
162.	Ferguson, Daniel Archibald	Dunedin.
	Hargreaves, Hilda Ethel	Greymouth.
164.	Ball, Thomas Murdy	Whangarei.
	Eyes, Wilhelmina Mabel	Christchurch.
	Moroney, Michael James	Dunedin.
167.	Doyle, Theresa	Westport.
	Herring, Henry Joseph	Palmerston North.
169.	Morrison, Elizabeth Stewart	Masterton.
	Wallace, William	Invercargill.
171.	McLeod, Catherine Elizabeth	Dunedin.
172.	Lucas, Ella Gertrude	Blenheim.
	McCarthy, Morgan Joseph Northover	Wellington.
	Makeig, Grace Helena	Christchurch.
175.	McLeod, John Duncan	Timaru.
	Murphy, Bernard Egan	Dunedin.
	Wilson, Charles Merton	Invercargill.
178.	Heighway, Florence Kathleen	Auckland.
	Lammas, Isobel	Nelson.
	Rhodes, Olive May	Auckland.
181.	MacShane, Dorothy	Auckland.
	Thorne, Alexander Thomas Crago	Auckland.
183.	Blanchett, Lewis James	New Plymouth.
184.	Godfrey, Henry	Christchurch.
185.	Swap, Alexander Wallace	Invercargill.
186.	Boyes, Montague Charles	Nelson.
	Ford, Norah Bayly Isabella	New Plymouth.
188.	Dellow, Percy	Auckland.
	Westrup, Agnes Catherine Iva	Wellington.
190.	Hull, James Ennis	Wellington.
191.	Duncan, Agnes	Wellington.
192.	Collins, James Collins	Dunedin.
193.	Bruce, Iris Frances	Christchurch.
	Phillips, Joseph	Auckland.
195.	Harbour, George Henry David	Dunedin.
	Sands, Arthur Buchanan	Lawrence.

	Candidate.	Examination Centre.
197.	Blake, Olive Mary	Wellington.
	Crickett, Atholl Glassford	Auckland.
	Marple, Walter Henry	Blenheim.
	Roberts, Mary Annear	New Plymouth.
	Ward, Vincent Aubrey	Wellington.
202.	Blackett, Katherine Shirley	Nelson.
	Mackay, Jessie Russell	Invercargill.
204.	Brunt, Harvey John	Christchurch.
205.	Caigon, Charles Alexander	Nelson.
	Wellwood, Ruby Maudine	Napier.
207.	McRae, James	Napier.
	Morcom, Annie Elizabeth	Blenheim.
	Thomas, Iris Mary	Wellington.
	Thompson, Harold Joseph	Wellington.
211.	Clark, Frederick George	Christchurch.
	Hornibrook, Charlotte Anne	Auckland.
	Kavanagh, James Paul	Masterton.
214.	Schierning, Arthur	Napier.
215.	Gillies, Robert Peter	Christchurch.
216.	Selby, Ralph	Invercargill.
217.	Cannons, Ernest	Wanganui.
	Hanron, Mabel Eileen	Nelson.
	Keith, Basil Hardy	Masterton.
220.	Garrey, Phoebe	Dunedin.
	McDonald, Robert	Lawrence.
222.	Nelson, Charles Lewis	Christchurch.
223.	McDonald, Richard	Palmerston North.
224.	Herlihy, Mary	Dunedin.
	Lowe, Levi Albert	Wellington.
	Youngman, Thomas Ernest	New Plymouth.
227.	Pilcher, Phillis Mary	Auckland.
228.	Coyle, John Francis	Masterton.
	Johnson, Minnie Maria	Auckland.
	Kernahan, Harold James	Christchurch.
231.	Partridge, Irene Phyllis	Auckland.
	Shaw, Thomas	Westport.
	Whitehead, Charles Lever	Christchurch.
234.	Cormack, Mary Gladys Penston	Masterton.
	O'Shaughnessy, William Francis	Christchurch.
236.	Eastick, Gordon Ambrose	Napier.
	Perry, Freda Mary	New Plymouth.
238.	Wadie, Henry	Dunedin.
239.	Connolly, Ralph Stuart	Thames.
	McGill, Winifred	Auckland.
241.	Manktelow, Lucy	Auckland.
242.	Brewster, Alice Lilian	New Plymouth.
243.	Nicol, William Harold	Oamaru.
244.	Park, William	Wellington.
245.	Duggan, John	Wellington.
246.	Kelly, Francis Edward	Wellington.
	Sullivan, Andrew James	Thames.
248.	Cox, Bartholomew	Hokitika.
	Rattray, Barbara Dolina	Timaru.
250.	Bateman, Harry George	Dunedin.
251.	Allnutt, William Westacott	Dunedin.
252.	Wildish, Catherine Clara Louisa	Gisborne.
253.	Campbell, Angus	Lawrence.
254.	Skelley, Harriet Mary	Masterton.
255.	Blackmore, Rosey Sarah	Christchurch.
	Islip, Percy Edward	Dunedin.
257.	Dennison, Thomas Allan Reid	Oamaru.
258.	Fleming, Mary	New Plymouth.
259.	Condell, Mary Edith Robin	Nelson.
260.	Gilligan, Eileen Cecilia Margaret	New Plymouth.
	Morgan, Wilfred Joshua	Christchurch.
262.	Hardman, Margaret Winifred	Invercargill.
263.	Murphy, Eveline Catheline	Wellington.
	Pierard, Thomas	Wellington.
265.	Rodger, James Cunningham	Christchurch.
266.	Hore, Joseph	Lawrence.
267.	Murray, George Wilson	Invercargill.

EXAMINATION PAPERS.

English Grammar and Composition.—For Class E. Time allowed: Three hours.

1. Explain fully the terms *relative pronoun, auxiliary verb, strong verb, adverbial clause, particle.* Give three examples of each.

2. Illustrate, by sentences, as many different meanings as you can of the verbs *to do* and *to have* (excluding slang).

3. Give a full analysis of the following, and parse all the italicised words:—

Stay, traveller, and rest thy limbs *awhile,*
Faint with the thirst, and worn with heat and toil;
Where thy good fortune brings thee, traveller, *stay.*
Rest to thy wearied limbs will here be sweet,
The wind and shade *refresh* thee from the heat,
And the cool fountain chase thy thirst *away.*

4. Show how the following could be better expressed:—

(*a.*) The ship was insured for a voyage from Cairo to Constantinople, with cement.
(*b.*) I had several men died in my ship of calentures.
(*c.*) Anthony was not less desirous of destroying the conspirators than his officers.
(*d.*) They were persons of such moderate intellects, even before they were impaired by their passions.
(*e.*) The sway of these islands is greater and more glorious than ancient Rome.

5. Show, by constructing sentences, that you fully understand the meaning of the following English words: *Synonym, heterogeneous, premisses, erudite, inclement.*

6. Write an essay (of about a page in length) on any one of the following subjects:—

(*a.*) The principle of "preference to unionists."
(*b.*) The life of some great discoverer or inventor.
(*c.*) The history of the Maoris.

7. Punctuate the following passage, and put capitals where they are required:—

yes sirrah it is very well for me as long as god is with me but he is with every man in this ship i would have you to know as much as he is with me do you fancy that i have nothing to lose i who have ventured in this voyage all i am worth and more who if i fail must return to beggary and scorn and if i have ventured rashly sinfully if you will the lives of any of you in my own private quarrel am i not punished have i not lost his voice trembled and stopped there but he recovered himself in a moment.

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

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

[The attention of the Supervisor is drawn to the fact that, as the candidates are probably unaccustomed to his voice and are writing in a room that is strange to them, there is need for more than usual care in the reading of the words and passage set for dictation. The enunciation of every word should be complete and distinct.

The following passage for dictation, and the list of words for spelling, with the explanation given of each, are first to be read aloud once; the passage, and the words without the explanations, are then to be dictated slowly to the candidates, and are afterwards to be read out again to afford opportunity for correction.]

(*a.*) "The growing agitation for repeal might have been met and stayed by a far-sighted minister and a sympathetic Parliament. But both conditions were wanting. The minister lacked foresight, and the Parliament lacked sympathy. The repeal movement was no mere revolutionary ebullition of the 'blind hysterics of the Celt.' It was the passionate cry of a nation neglected in its distress."

(*b.*) (1.) Emolument (gain, profit). (2.) Hieroglyphics (sacred symbols). (3.) Hussar (a cavalry soldier). (4.) Illimitable (boundless). (5.) Laboratory (a chemist's workroom). (6.) Minaret (a turret on a mosque). (7.) Pamphlet (a small book). (8.) Accommodate (to adapt, suit). (9.) Mediterranean (name of a sea). (10.) Veneer (to overlay with wood).

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

1. Define, and illustrate by examples, the following grammatical terms: *inflexion, derivation, case, accent,* and *strong-weak verb.*

2. Construct sentences to show the correct use of the following words: *aggravate, perspicacity, infer, relation, appraise.* Define the meaning of each word; point out any common inaccuracies in its use; and give all the principal usages in the case of those which have more than one meaning.

3. Analyse the following passage, and parse all the italicised words:—

As in the gardens, *all* through May, the rose,
Lovely, and young, and fair apparelled,
Makes sunrise *jealous* of her rosy red,
When dawn upon the dew of *dawning* glows;
Graces and Loves within her breast repose,
The woods are faint with the sweet odour *shed,*
Till rains and heavy suns have smitten dead
The languid flower, and the loose leaves unclose,—

So this, the perfect beauty of our days,
When earth and heaven were vocal of her praise,
The fates have slain, and her sweet soul reposes;
And tears I bring, and sighs, and on her tomb
Pour milk, and scatter buds of many a bloom,
That dead, *as* living, she may be with roses.

4. Make a list of standard English words (not less than six or more than twelve) whose pronunciation varies and seems not fixed. Indicate (as far as possible by giving rhymes to them) what you consider to be the "correct" pronunciation in every case.

5. State full reasons for and against the substitution of phonetic spelling for our present system.

6. Write a short essay (not more than three paragraphs) on one of the following subjects:—
(1.) "Education should aim at the formation of character as well as of intellect."
(2.) The importance of science in education.
(3.) What is the maximum number of children who can properly be taught in one class, at the ages of 8, 12, and 14 respectively?

7. Punctuate the following passage, and put capitals where they are required:—

they scoff at our europeans for eating bread which they call tops of weeds and horsemeat not fit for men and yet scaliger accounts them a sound and witty nation living an hundred years even in the civilest country of them they do thus as benedict the jesuite observed in his travels from the great moguls court by land to paquin which riccius contends to be the same with cambalu in cataia in scandia their bread is usually dried fish and so likewise in the shetland isles and their other fare as in iceland saith dithmarus bleskenius butter cheese and fish their drink water their lodging on the ground.

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

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

[The attention of the Supervisor is drawn to the fact that, as the candidates are probably unaccustomed to his voice and are writing in a room that is strange to them, there is need for more than usual care in the reading of the words and passage set for dictation. The enunciation of every word should be complete and distinct.

The following passage for dictation, and the list of words for spelling, with the explanation given of each, are first to be read aloud once; the passage, and the words without the explanations, are then to be dictated slowly to the candidates, and are afterwards to be read out again to afford opportunity for correction.]

(*a.*) All which our ordinary students right well perceiving in the universities—how unprofitable these poetical, mathematical, and philosophical studies are, how little respected, how few patrons—apply themselves in all haste to those three commodious professions of law, physic, and divinity, sharing themselves between them, rejecting these arts in the meantime, history, philosophy, philology, or lightly passing them over, as pleasant toys, fitting only table talk, and to furnish them with discourse.

(*b.*) (1.) Unparalleled (having no parallel or equal). (2.) Separate (to disunite or divide). (3.) Fulfilment (accomplishment). (4.) Harass (to fatigue, weary, annoy). (5.) Teutonic (Gernic, pertaining to the Teutons). (6.) Battalion (a body of troops). (7.) Complement (that which fills up or completes). (8.) Effervesce (to be in a state of ebullition). (9.) Homogeneous (of the same kind or nature). (10.) Diphthong (coalition of two vowel sounds).

English Grammar and Composition, I.—For Civil Service Junior. Time allowed: Three hours.

1. What are—verb of incomplete predication, adjective clause, gerundial infinitive, apposition, abstract noun? Give an example of each.

2. Mention and illustrate the difference in meaning and usage of the following words when used (*a*) as notional, (*b*) as auxiliary, verbs: be, shall, will, may, have.

3. Analyse fully the following passage, and parse the italicized words:—

If thou *must love* me, let it *be* for *naught*
Except for love's sake *only*. Do not say,
"I love her for her smile—her look—her way
Of *speaking* gently,—for a trick of thought
That falls in well with *mine*, and *certes* brought
A sense of pleasant ease on *such* a day."

4. Rewrite the following passage in the 3rd person, following the words "He said":—

I am astonished, shocked, to hear such principles confessed, to hear them avowed in this House or in this country—principles equally unconstitutional, inhuman, and unchristian. My lords, I did not intend to have trespassed again on your attention, but I cannot repress my indignation. I feel myself impelled by every duty. My lords, we are called upon, as members of this House, as men, as Christian men, to protest against such notions, standing near the throne, polluting the ear of majesty. "That God and nature put into our hands"! I know not what idea that lord may entertain of God and nature, but I know that such abominable principles are equally abhorrent to religion and humanity. What! attribute the sacred sanction of God and nature to the massacres of the Indian scalping-knife, to the cannibal savage, torturing, murdering, roasting, and eating—literally, my lords, *eating*—the mangled victims of his barbarous battles! Such horrible notions shock every precept of religion, divine and natural, and every generous feeling of humanity; and, my lords, they shock every sentiment of honour; they shock

me as a lover of honourable war, and a detester of murderous barbarity. These abominable principles, and this more abominable avowal of them, demand most decisive indignation. I call upon that right reverend bench, those holy ministers of the gospel and pious pastors of the church,—I conjure them to join in the holy work, and to vindicate the religion of their God. I appeal to the wisdom and the law of this learned bench to defend and support the justice of their country. I call upon the bishops to interpose the unsullied sanctity of their lawn, upon the learned judges to interpose the purity of their ermine, to save us from this pollution. I call upon the honour of your lordships to reverence the dignity of your ancestors, and to maintain your own.

—*Chatham.*

5. Give in idiomatic English prose the sense of the following passage :—

Near yonder copse, where once the garden smiled,
And still where many a garden flower grows wild,
There, where a few torn shrubs the place disclose,
The village preacher's modest mansion rose.
A man he was to all the country dear,
And passing rich with forty pounds a year;
Remote from towns he ran his godly race,
Nor e'er had changed, nor wished to change, his place;
Unskilful he to fawn, or seek for power,
By doctrines fashioned to the varying hour;
Far other aims his heart had learned to prize,
More bent to raise the wretched than to rise.
His house was known to all the vagrant train,
He chid their wanderings, but relieved their pain;
The long-remembered beggar was his guest,
Whose beard descending swept his aged breast;
The ruined spendthrift, now no longer proud,
Claimed kindred there, and had his claims allowed;
The broken soldier, kindly bade to stay,
Sat by his fire, and talked the night away;
Wept o'er his wounds, or, tales of sorrow done.
Shouldered his crutch, and showed how fields were won.
Pleased with his guests, the good man learned to glow,
And quite forgot their vices in their woe;
Careless their merits or their faults to scan,
His pity gave ere charity began.
Thus to relieve the wretched was his pride,
And e'en his failings leaned to virtue's side;
But in his duty prompt, at every call,
He watched and wept, he prayed and felt, for all.
And, as a bird each fond endearment tries
To tempt its new-fledged offspring to the skies,
He tried each art, reproved each dull delay,
Allured to brighter worlds, and led the way.

—*Goldsmith.*

6. Point out any errors you see in the following sentences, and rewrite in correct English :—

(*a.*) All the bakers rose the price of bread last week.

(*b.*) She had met the most distinguished governors, generals, and their ladies, several of whom were noblemen.

(*c.*) Alarmed by so unusual an occurrence, it was resolved to postpone their departure.

(*d.*) What is the reason that our language is less refined than those of Italy, Spain, or France?

(*e.*) I have never seen Major Cartwright, much less enjoy the honour of his acquaintance.

(*f.*) I had several men died in my ship of yellow fever.

7. Form six short sentences, each one illustrating the correct use of one of the following words: conscious, unique, nice, awful, observance, averse.

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

Hurrah hurrah out of the way there room for the governor a rush of many feet up the stairs more cheering the door is thrown open and a party of from fifteen to twenty undergraduates come pouring in with mr frampton in the midst of them carried in triumph on the shoulders of lawless and another man and waving a list in one hand and the broad-brimmed hat in the other bravo fairlegh all right old fellow never say die hurrah exclaimed half a score voices all at once while both my hands were seized and nearly shaken off and i was almost annihilated by congratulatory slaps on the back from my zealous and excited friends well exclaimed i as soon as i could make myself audible amidst the clamour i suppose by your congratulations i'm not plucked but how high do i stand silence there shouted lawless order order hear the governor he's got the list fire away sir thus appealed to mr frampton who was still mounted on the shoulders of his supporters having cleared his throat and grunted proudly with an air of majesty read as follows rushbrook senior wrangler crosby second barham third fairlegh fourth nonsense exclaimed i springing up the thing's impossible what an unbelieving jew it is said archer hand him the list and let him read it himself seeing is believing they say.

English Grammar and Composition, II.—For Civil Service Junior. Time allowed: Two hours.

1. Write an essay on one of the following subjects, paying great attention to expression, punctuation, and neatness of form :—

(*a.*) The uses of knowledge.
(*b.*) Night.
(*c.*) "Dreams, books, are each a world; and books, we know,
Are a substantial world, both pure and good."

2. As a test of spelling, write the passage and words dictated by the Supervisor.

[The candidate is requested to number the words, to write them in a column, and to use a fresh page for each of the spelling exercises. No marks will be given for a word that contains a doubtful letter. The letter "e" must be looped, the letter "i" must be dotted, and the letter "t" must be crossed.]

Dictation and Spelling (Part of a Paper on English Grammar and Composition).—For Junior Civil Service.

[The Supervisor is requested to draw the attention of the candidates to the directions given with regard to Question 2.

The following passage for dictation, and the list of words for spelling, with the explanation given of each, are first to be read aloud once; the passage, and the words without the explanations, are then to be dictated slowly to the candidates, and are afterwards to be read out again to afford opportunity for correction.]

PASSAGE FOR DICTATION.

The plan to which I allude is, that when any subject becomes unmanageable by the inductive method, whether from the impossibility of experimenting upon it, or from its extreme natural complexity, or from the presence of immense and bewildering details collected around it, we may in all such cases make an imaginary separation of inseparable facts, and reason upon trains of events which have no real and independent existence, and which are nowhere to be found except in the mind of the inquirer. A result obtained in this way cannot be strictly true; but, if we have reasoned accurately, it will be as near truth as were the premises from which we started. To make it perfectly true we must confront it with other results which we have arrived at in a similar way and from the same subject. These separate inferences may eventually be co-ordinated into a single system; so that, while each inference contains only an imperfect truth, the whole of the inferences when put together will contain perfect truth.

WORDS TO BE SPELT.

1. Appurtenance (an adjunct). 2. Eucharist (the Lord's Supper). 3. Cochineal (a dye-stuff). 4. Mischievous (harmful). 5. Erroneously (mistakenly). 6. Apostasy (renunciation of a faith). 7. Escutcheon (shield displaying heraldic bearings). 8. Vizor (part of a helmet). 9. Philippic (discourse abounding in invective). 10. Anachronism (error in chronology). 11. Colonnade (a series of columns). 12. Aggrieve (annoy). 13. Codicil (clause added to a will). 14. Poniard (dagger). 15. Schismatic (one who creates a schism; a heretic). 16. Plebeian (vulgar). 17. Gallinaceous (resembling common fowls). 18. Tyrannize (to act the tyrant). 19. Seneschal (a steward). 20. Criterion (a standard of comparison).

English Language and Literature.—For Civil Service Senior. Time allowed: Three hours.

1. Discuss the history and use of the infinitive mood in English.

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

(*a.*) Shakespeare's treatment of history as exemplified in "King Henry IV."
(*b.*) The Arthurian legend in English literature.
(*c.*) "Two voices are there; one is of the sea,
One of the mountains; each a mighty voice."

3. Write short explanatory notes on the following passages, mentioning in each case the speaker and the occasion on which the words were uttered :—

(*a.*) If all the year were playing holiday
To sport would be as tedious as to work.
(*b.*) Shall the blessed sun of heaven prove a micher and eat blackberries?
(*c.*) See how this river comes me cranking in.
(*d.*) All plumed like estridges that with the wind
Baited like eagles having lately bathed.
(*e.*) I'll murder all his wardrobe, piece by piece.

4. Give as full an account as you can of either Falstaff *or* Hotspur, describing his actions and his character, and illustrating by quotations from Shakespeare's "King Henry IV."

5. Give in your own words the gist of *one* of the following essays by Charles Lamb: (*a*) The South Sea House; (*b*) Imperfect Sympathies; (*c*) A Bachelor's Complaint of the Behaviour of Married People.

6. What do you consider the various elements of Charles Lamb's humour? Illustrate as fully as you can from the "Essays of Elia."

7. What is an idyll? How far, in your opinion, was Tennyson justified in adopting the title of "Idylls of the King"? Trace what you consider to be the connecting link that unites the separate idylls and gives the whole the unity of a single poem.

8. Write short explanatory notes on the following expressions: (*a*) The Siege Perilous; (*b*) the lily maid of Astolat; (*c*) Excalibur; (*d*) Lords of the White Horse; (*e*) the Tournament of Youth; (*f*) Avilion; (*g*) Azure, an eagle rising or, the sun In dexter chief; the scroll, "I follow fame."

9. What was the Holy Grail? Give Tennyson's version of the legend, and compare it, if you can, with earlier versions.

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

[N.B.—Great importance is attached to the correct rendering of the passages set for translation from and into Latin.]

1. Translate into English :—

(*a.*) *A Brave Admiral.*

Rhodiis navibus praeerat Euphranor, animi magnitudine ac virtute magis cum Romanis quam cum Graecis comparandus. Hic ob notissimam scientiam atque animi magnitudinem delectus est ab Rhodiis qui imperium classis obtineret. Qui ubi Caesaris animum advertit, "Videris mihi" inquit "Caesar, vereri, si haec vada primis navibus intraveris, ne prius dimicare cogaris quam reliquam classem potueris explicare. Nobis rem committe: nos proelium sustinebimus, neque tuum iudicium fallemus, dum reliqui subsequantur. Hos quidem diutius in nostro conspectu gloriari magno nobis dedecori et dolori est." Caesar illum adhortatus atque omnibus laudibus prosecutus dat signum pugnae.

— De Bello Alexandrino, 15.

(*b.*) *Phocion's Integrity.*

Phocion Atheniensis etsi saepe exercitibus praefuit summosque honores cepit, tamen multo eius notior est integritas vitae quam rei militaris labor. Itaque huius memoria est nulla, illius autem magna fama, ex quo cognomine Bonus est appellatus. Fuit enim perpetuo pauper, cum divitissimus esse posset propter frequentes delatos honores potestatesque summas quae ei a populo dabantur. Hic cum a rege Philippo munera magnae pecuniae repudiaret, legatique hortarentur ut acciperet, simulque admonerent, si ipse iis facile careret, liberis tamen suis prospiceret, quibus difficile esset in summa paupertate tantam paternam tueri gloriam, his ille "Si mei similes erunt, idem hic" inquit "fundus illos alet qui me ad hanc dignitatem perduxit: sin dissimiles sunt futuri, nolo meis impensis illorum ali augerique luxuriam.

Meis impensis: at my expense.

(*c.*) *Mutability of Fortune.*

"Litus ad Euxinum" si quis mihi diceret "ibis
Et metues, arcu ne feriare Getae";
"I, bibe," dixissem "purgantes pectora sucos,
Quicquid et in tota nascitur Anticyra."
Sum tamen haec passus; nec, si mortalia possem,
Et summi poteram tela cavere dei.
Tu quoque fac timeas; et quae tibi laeta videntur,
Dum loqueris, fieri tristia posse puta.

—*Ovid*—Epist. ex Ponto IV. iii. 51.

2. Translate into Latin :—

(*a.*) He is feared, but not envied.
(*b.*) I have nothing to say to you.
(*c.*) I do not know whether he will come or not.
(*d.*) They could not be restrained from making an attack on the foe.
(*e.*) He spoke without persuading the senate.
(*f.*) Cæsar gave orders that no one should be absent from the camp for more than three hours.
(*g.*) Of that supper in the house of Antony one curious incident is recorded. The consul knew that all the conspirators hated him and desired to kill him; therefore under his toga he wore a breastplate. During the meal he turned suddenly on Cassius and said, "Well, have you a concealed dagger for me also?" "Yes," replied the murderer, "one long enough to slay you too if you venture to be a tyrant."

3. Answer the following questions on the three passages set for translation into English :—

(*a.*) Conjugate *delectus, cogaris, fallemus.* Comment on the mood of *obtineret* and on the construction of *nobis dedecori est.* What is the Latin for "He was afraid that the rest of the ships would not follow"?
(*b.*) Parse *multo, quo, delatos.* Write notes on the mood of *posset, prospiceret, esset,* and on the case of *rei* and *mei.* Conjugate *prospiceret, tueri, augeri.*
(*c.*) Which of the words in this passage are in the subjunctive mood, and why? Distinguish between *totus* and *omnis,* between *aliquem cavere* and *alicui cavere,* and between *loquĕris* and *loquēris.* Explain the form *fac,* and say what other verbs have the same peculiarity.

Latin.—For Civil Service Senior. Time allowed: Three hours.

[N.B.—Great importance is attached to the correct rendering of the passages set for translation from and into Latin.]

1. Translate into English :—

(*a.*) *Carthage appeals for mercy.*

Ceterorum miserabilior oratio fuit commemorantium ex quantis opibus quo recidissent Carthaginiensium res; nihil iis, qui modo orbem terrarum obtinuerint armis, superesse praeter Carthaginis moenia; his inclusos non terra non mari quicquam sui iuris cernere, urbem quoque ipsam ac penates ita habituros, si non in eo quoque, quo nihil ulterius sit, saevire populus Romanus vellet. Cum flecti misericordia patres appareret, senatorem unum infestum perfidiae Carthaginiensium subclamasse ferunt, per quos deos foedus icturi essent, cum eos per quos ante ictum esset fefellissent; "Per eosdem," inquit Hasdrubal, "quoniam tam infesti sunt foedera violantibus."

—*Livy*—xxx. 42.

(*b.*) *Grief ought to be controlled.*

Ergo in potestate est abicere dolorem, cum velis, tempori servientem. An est ullum tempus, quoniam quidem res in nostra potestate est, cui non ponendae curae et aegritudinis causa serviamus? Constabat eos, qui concidentem volneribus Cn. Pompeium vidissent, cum in illo ipso acerbissimo miserrimoque spectaculo sibi timerent, quod se classe hostium circumfusos viderent, nihil aliud tum egisse, nisi ut remiges hortarentur et ut salutem adipiscerentur fuga; posteaquam Tyrum venissent, tum adflictari lamentarique coepisse. Timor igitur ab his aegritudinem potuit repellere, ratio ab sapienti viro non poterit?—*Cicero*—Tusc. iii. 27.

(*c.*) *Mezentius, about to die, addresses his horse.*

Simul hoc dicens attolit in aegrum
Se femur, et, quamquam vis alto volnere tardat,
Haud deiectus equum duci iubet. Hoc decus illi,
Hoc solamen erat; bellis hic victor abibat
Omnibus. Adloquitur maerentem et talibus infit:
"Rhaebe, diu, res si qua diu mortalibus ulla est,
Viximus. Aut hodie victor spolia illa cruenti
Et caput Aeneae referes, Lausique dolorum
Ultor eris mecum, aut, aperit si nulla viam vis,
Occumbes pariter; neque enim, fortissime, credo,
Iussa aliena pati et dominos dignabere Teucros."
—*Virgil*—Aen. x. 856.

2. Translate into Latin prose:—

(NOTE.—Some help for doing the first passage will be got from the first extract set for translation into English.)

(*a.*)

He recalled to their minds his many wars, and the high position to which his policy had exalted England among the nations of the world. In fact, he said, there was little left, either on land or sea, for their victorious arms to conquer. Their enemies were shut up within the walls of their towns, and were suffering the vengeance of Heaven for their violation of treaties, and their sufferings were such as to move the compassion even of their bitterest enemies. It remained for them now to spare the conquered, and to unite to their empire by the bonds of peace those extensive territories which they had won by the edge of the sword.

(*b.*)

Here a misadventure happened which well nigh changed the course of history. The king caught a chill, which resulted in violent fever and sleepless nights, and his physicians despaired of his life. Whilst Philip of Acarnania, who was eminent for his medical skill, was preparing a draught in the king's tent, a letter was placed in Alexander's hand. It was from Parmenio, and was a warning against Philip, alleging that Darius had bribed him to poison his master. Alexander, taking the cup, gave Philip the letter to read, and while Philip read Alexander swallowed the medicine. His generous confidence was justified, and under the care of Philip he soon recovered from his sickness.

To catch a chill: *frigus colligere.* Draught: *potio.* To bribe: *pecunia corrumpere.*

3. Answer the following questions on the passages set for translation into English:—
   (*a.*) In passage (*a*).—Why is *recidissent* in the subjunctive mood? Distinguish *ceteri, alii; recĭdere, recīdere; quisquam, aliquis; ius, fas.*
   (*b.*) In passage (*b*).—Explain the cases of *cui, volneribus, Tyrum.* Conjugate *obicere, circumfusos, adipiscerentur, repellere.* What interrogative particles are there in Latin? Explain the uses of them.
   (*c.*) In passage (*c*).—Give the genders of *femur, vis, volnus, dolor.* Write notes on the position of *cum* (preposition), the moods used after concessive conjunctions in Latin, the gender of *hoc* in *hoc decus illi.* Give the Latin for "yesterday," "to-morrow," "three days ago."

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

1. (*a.*) Translate into English:—

Marshal Saxe and the Blacksmith.

Le maréchal de Saxe, voulant un jour donner une preuve de la force, entra chez un forgeron sous prétexte de faire ferrer son cheval, et comme il trouva plusieurs fers préparés, il en prit cinq ou six qu'il rompit successivement. "N'en as-tu pas de meilleurs qui ceux-ci?" dit-il à l'ouvrier. Le forgeron admira en silence. Enfin le maréchal feignit d'en trouver un bon, qui fut mis au pied du cheval. L'opération faite, il jeta une pièce de dix francs sur l'enclume. "Pardon, monsieur," dit le forgeron, "je vous ai donné un bon fer, il faut me donner une bonne pièce d'argent." Il rompit la pièce en deux, et en fit autant de quatre à cinq autres que le maréchal lui donna. "Parbleu, tu as raison," lui dit le comte, "toutes ces pièces sont mauvaises; mais voici un louis d'or, qui, j'espère, sera bon." Le maréchal convient qu'il avait trouvé son maître.

(*b.*) *Un jour :* What is the difference between *un jour* and *une journée ?*
(*c.*) *Entra chez un forgeron :* Express the same meaning in two other ways.
(*d.*) *Pièce :* Do you know any other meanings for *pièce* besides that in which it is used here ?
(*e.*) *Autant :* Write two or three short sentences in French to show that you understand the difference between *tant* and *autant.*

2. (*a.*) Translate into English :—

[*From a French Newspaper of 14th June, 1903.*]

" Nous avons pu, l'autre jour, annoncer la visite que le président de la République va rendre au roi d'Angleterre, à Londres, et celle qu'il va recevoir lui-même, à Paris, du roi Victor Emmanuel. La visite de M. Loubet est fixée au 6 juillet, et se prolongera du lundi au jeudi. Bien que la presse anglaise n'ait pas encore fait connaître le programme des fêtes qui seront offertes au président, on peut penser qu'elles seront splendides. Nos voisins ont déjà demandé au président de ne pas descendre à l'ambassade de France, mais au palais de Saint-James—c'est à dire, d'être doublement leur hôte—celui de l'Angleterre et celui du souverain, puisque Saint-James est une demeure princière ; et cette attention est déjà fort significative. La visite italienne suivra presque immédiatement. Nous avons ici, en effet, une preuve que les deux peuples, si imbécilement séparés par la politique de Crispi, marchent vers une reconciliation complète. Victor Emmanuel sera notre hôte du 16 au 20 juillet.

(*b.*) Give the first person singular of the present indicative (affirmatively and interrogatively : *e.g.*, " I wish," " Do I wish ? ") and the past participle of—*rendre, aller, connaître, suivre, offrir.*

3. Translate into English :—

Playmates.

Bientôt Adèle, au travail occupée,
Orne avec soin sa docile poupée (*doll*),
Sur ses devoirs lui fait un long discours,
L'écoute ensuite ; et, répondant toujours
A son silence, elle gronde (*scolds*) et pardonne,
La gronde encore, et sagement lui donne
Tous les avis qu'elle-même a reçus,
En ajoutant : " Surtout ne mentez plus."
Un bruit soudain la trouble et l'intimide :
Son jeune frère, écuyer (*rider*) intrépide,

Caracolant sur un léger bâton,
Avec fracas traverse le salon.
Il voit passer des poudreux escadrons
De l'ennemi ; et des aigres clairons (*trumpets*)
Le son guerrier l'anime. . .
Il va partir ; mais Adèle tremblante,
Courant à lui le retient dans ses bras,
Verse des pleurs, et ne lui permet pas
De se ranger sous l'enseigne flottante.

4. Translate into French :—

(*a.*) A little girl and her brother were playing together in a large room. The girl was quietly amusing herself with her doll, undressing it, putting it to bed, and giving it a few words of advice : " Good night, dear ; I hope you will sleep well, and try to be good (*sage*) all to-morrow." Suddenly she hears a loud noise. It is her brother, who, mounted upon a stick, is charging violently up and down the room. He is a soldier fully armed, who is hastening to battle. He hears the sound of the foemen's trumpets and longs to be fighting. The little girl is terrified. She runs up to her brother, takes him by the arm, and begs him not to go to battle. " What shall I do if you are killed ? " she says. " Who will defend me if you leave me here all alone ? " The boy does not know what to do ; but, seeing his sister begin to cry, at last he says, " Well, I did want very much to go to the wars, but as you are only a girl I will stay here and defend you."

(*b.*)

DEAR FATHER,—

I have been in London for a week, and have had an unexpected (*inattendu*) pleasure. The French President paid a visit to the King at the latter's invitation, and spent several days in England. We hurried to London and saw everything. M. Loubet is rather a short man with a white beard and white hair, who looks very dignified. The city was beautifully decorated, and all the people applauded their visitor loudly whenever he appeared. I cannot write more now, as the mail is just leaving : you shall have a longer letter soon.

Your affectionate son,
JOHN.

5. Translate into French :—

(*a.*) Which is the house of which (*two ways*) he has spoken to you ?
(*b.*) What time is it ? It has just struck six.
(*c.*) None of these novels (*romans*) will suit you : in fact, I don't think I have a single book you will like.
(*d.*) Whoever the authors may be, and however clever they may be, they will not succeed.
(*e*) He went away without anybody's knowing it.

French.—For Civil Service Senior.

I. (*a.*) Translate into English :—

Characteristics of Modern Civilisation.

Les sciences expérimentales et progressives, ayant embrassé dans leur domaine les affaires politiques et morales, et pénétrant tous les jours dans l'éducation, changent l'idée que l'homme se faisait de la société et de la vie : il était un animal militant qui considérait les autres hommes comme une proie et la prospérité des autres hommes comme un danger : elles le transforment en une créature pacifique qui considère les autres comme des auxiliaires et la prospérité des autres hommes comme un profit. Chaque boisseau de blé qu'on produit en Russie et chaque aune d'étoffe qu'on fabrique en Angleterre diminuent d'autant le prix dont je paye le blé et les étoffes. Par conséquent mon intêret est, non pas tuer le Russe qui a produit le blé, ou l'Anglais qui a fabriqué l'étoffe, mais de les aider à en fabriquer ou à en produire deux fois davantage. Jamais civilisation humaine ne s'est trouvé dans des conditions semblables ; c'est pourquoi on peut espérer que celle-ci, étant mieux bâtie que les autres, n'ira pas se lézardant, puis s'effondrant comme les autres : du moins, on est autorisé à croire que parmi des ébranlements ou des inachèvements partiels, comme en Pologne et en Turquie, elle subsistera et s'achèvera dans les principaux emplacements où l'on voit ses constructions s'élever.—*Taine.*

(*b.*) *Qu'on produit ; où l'on voit :* What considerations would guide you in the use of *l'* before *on ?*

(*c.*) *Emplacements :* Give the exact meanings of *lieu, endroit, place, localité ;* or show by four short examples, each containing one of the words, that you understand the differences in meaning of these words.

(*d.*) *Étoffe* is the English word "stuff" (German *Stoff*) : Quote two or three other pairs of words to illustrate the tendency of the French language to avoid harsh groups of consonants which are tolerated in English.

II. (*a.*) Translate into English :—

Marat.

Un visage livide et crispé par le fièvre,
Le sarcasme fixé dans un coin de la lèvre,
Des yeux clairs et perçants, mais blessés par le jour ;
Un cercle malidif qui creuse leur contour ;
Un regard affronté qui provoque et défie,
L'horreur des gens de bien, dont il se glorifie,
Le pas brusque et coupé du pale scélérat,
Tel on se peint le meurtre, et tel on voit Marat . . .
Ecoutez-le parler : "Il faut qu'on institue
Un magistrat du meurtre, un dictateur qui tue."
C'est Marat, c'est Marat ! Pour le peindre d'un trait,
Il m'a dit de sang-froid, tout comme il le ferait,
Que l'unique moyen de calmer nos tempêtes,
C'est d'abattre deux cent soixante mille têtes !
Voilà son taux—deux cent soixante seulement !
Jusques à trois cent mille il monte rarement . . .
Ceux qui l'ont offensé sont tous morts ou proscrits,
Et l'épouvante enfin l'a sauvé du mépris.

—*Ponsard.*

(*b.*) *Dont il se glorifie :* Give six other French verbs which are followed by *de* with a noun or pronoun.

(*c.*) Give the first person singular and third person plural of the present indicative and imperfect subjunctive of the following : *Payer, espérer, produire, croire, peindre, dire, voir, faire.*

III. (*a.*) Translate into French :—

Marat, in his paper "The People's Friend," had consistently advocated a dictatorship, and promoted the massacres. When he came forward in the Assembly to defend his conduct, a feeling of horror seized all present. Marat was quite calm. "Many here are personal enemies of mine," said he ; "I appeal to their sense of shame ; I beg them to suppress these shouts of fury and disgraceful threats uttered against a man who has done great service in the cause of liberty. Let them give me at least one hearing." Thereupon he discussed at length to his astounded audience his views upon proscription and dictatorship. For many days he had fled from cellar to cellar, pursued by public hatred and police-warrants. But his bloodthirsty journal had nevertheless continued to appear, and by it he had prepared the people for the September massacres. He had certain convictions. He believed that the Revolution was opposed by a number of foes who must be removed if the Revolution were to be successful. To him it seemed a simple thing to exterminate them and appoint a dictator whose sole duty should be proscription. This doctrine he preached aloud with cynical brutality. He cared as little for men's opinion as for their lives. He despised as cowards all those who condemned his system as cruel. Many men appeared during the Revolution as bloodthirsty as he ; none who exercised a more disastrous influence on the period.

(*b.*) Write a short essay, about fifteen lines, on the subject of either "*Est-ce que la Nouvelle-Zélande tirerait du profit du nouveau système d'impôts proposé par M. Chamberlain ?*" or, "*Le radium.*"

IV. Give the French for : He is as busy as you. He is so busy. He works too hard. Which of these books will you have ? Neither, thank you. Of these two writers one is as good as the other. Do you know of anything more beautiful ? Yes, many things. Is there anybody who dares to deny this truth ? I do. The house whence I come is illustrious.

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

[N.B.—If you write in German characters use a fine pen.]

1. (*a.*) Translate into English :—

Hildebrand and Dietrich go forth in Search of Adventures.

Als Hildebrand den jungen Fürsten in allen ritterlichen Künsten unterrichtet hatte, führte er ihn hinaus in die Fremde, damit er Abenteuer suche und finde. Eines Tages trafen die Wanderer auf einen greulichen Riesen und ein ungefüges Weib. Dietrich kämpfte mit dem Riesen, Grim war seine Name, und erschlug ihn. Unterdessen hatte Hilde, die Schwester des Erschlagenen, mit gewaltigen Armen Hildebrand umstrickt. Aus Mund und Nase strömte ihm das Blut, und er war nahe daran, zu sterben. Da eilte Dietrich herbei, und mit dem von dem Riesen Grim erbeuteten Schwerte befreite er Hildebrand von dem schrecklichen Weibe. "Jungherr," so sagte Hildebrand, "heute hast du dich als den Meister erwiesen." Mit dem ersten Abenteuer hatte Dietrich ein herrliches Schwert und grossen Ruhm sich erworben.

(*b.*) *Suche und finde:* Why are these verbs in the subjunctive? Under what other circumstances would you use the subjunctive in German?

(*c.*) *Eines Tages:* Could the meaning of these two words be expressed in any other way in German?

(*d.*) *Mit gewaltigen Armen:* Give the nom., acc., and gen. singular and plural of *gewaltigen Armen.*

(*e.*) Give the comparative and superlative of all the adjectives in I. (*a*).

2. (*a.*) Translate into English :—

Nature.

Wie ist doch die Erde so schön, so schön?
Das wissen die Vögelein :
Sie heben ihre leichte Gefieder,
Und singen so fröhliche dieder
In den blauen Himmel hinein.
Wie ist doch die Erde so schön, so schön?
Das wissen die Flüss' und Seen :
Sie malen in klarem Spiegel
Die Gärten und Städt' und Hügel
Und die Wolken, die drüber gehen!
Und Sänger und Maler wissen es,
Und es wissen es viel andere Leute!
Und wer's nicht malt, der singt es,
Und wer's nicht singt, dem klingt es
In dem Herzen vor lauter Freude!

(*b.*) Give the third person singular of the present indicative, the third person singular of the imperfect subjunctive, and also the past participle of the following: *finden, sterben, rewerben, singen, gehen, malen.*

3. Translate into German :—

The two friends took their swords, mounted their horses, and went forth to seek adventures. They were master and servant, but the servant was very brave, and wanted an opportunity of showing his courage. They journeyed for many days, and at last saw two giants, a man and a woman. At first the two friends were frightened, but they were ashamed to run away, and so attacked the giants. The fight lasted a long time. One of the friends conquered and killed his opponent, but the other had much difficulty in defending himself. At length the victorious servant went to help his master, and both the giants were slain.

4. Translate into German :—

(*a.*) I will come to see you at five o'clock.
(*b.*) Next Wednesday is the first day of the month; don't forget it.
(*c.*) Do you understand what I say?
(*d.*) Read as many German books as you can: they are not so hard as they seem to be.
(*e.*) Please order bread, butter, milk, sugar, coffee, and eggs, and we will have breakfast.

German.—For Civil Service Senior. Time allowed: Three hours.

[N.B.—If you write in German characters use a fine pen.]

1. (*a.*) Translate into English :—

Eugenia's Answer to a Proposal of Marriage.

Eugenia lächelte unmerklich und errötete nicht einmal, so sehr hatte ihre Wissenschaft und Geistesbildung alle feinern Regungen des gewöhnlichen Lebens in ihr gebunden. Dafür nahm sie ein ernstes, tiefsinniges Aussehen an und erwiderte ihm: "Dein Wunsch, O Aquilinus, mich zur Gattin zu nehmen, ehrt mich in hohem Grade, kann mich aber nicht zu einer Unweisheit hinreissen; und eine solche wäre es zu nennen, wenn wir, ohne uns zu prüfen, dem ersten rohen Antriebe folgen würden. Die erste Bedingung, welche ich von einem etwaigen Gemahl fordern müsste, ist, dass er mein Geistesleben und Streben versteht und ehrt und an demselben teilnimmt. So bist du mir denn willkommen, wenn du öfter um mich sein und im Wetteifer mit diesen

meinen Jugendgenossen dich üben magst, mit mir nach den höchsten Dingen zu forschen. Dabei werden wir dann nicht ermangeln zu lernen, ob wir für einander bestimmt sind, oder nicht, und wir werden uns nach einer Zeit gemeinsamer geistiger Thätigkeit so erkennen, wie es gottgeschaffenen Wesen geziemt, die nicht im Dunkel, sondern im Lichte wandeln sollen."

—*Gottfried Keller.*

(*b.*) *So sehr hatte . . . :* Under what circumstances does this inversion of subject and verb generally take place in German?

(*c.*) *Hinreissen:* What is the usual force of *hin*, *her*, *um*, *ver*, *wider*, as prefixes?

(*d.*) *Müsste:* Why is the imperfect *subjunctive* used here?

(*e.*) *Sondern:* Why not *aber?*

2. (*a.*) Translate into English:—

A Morning Song.

Wer schlägt so rasch an die Fenster mir
Mit schlanken grünen zweigen?
Der junge Morgenwind ist hier
Und will sich lustig zeigen.
"Heraus, heraus, du Menschensohn!"
So ruft der kecke Geselle—
"Es schwärmt von Frühlingswonnen schon
Vor deiner Kammerschwelle.
Hörst du die Käfer summen nicht?
Hörst du das Glas nicht klirren,
Wenn sie, betäubt von Duft und Licht,
Hart an die Scheiben klirren?
Die Sonnenstrahlen stehlen sich
Behende durch Blätter und Ranken,
Und necken auf deinem Lager dich
Mit blendendem Schweben und Schwanken.
Die Nachtigall ist heiser fast,
So lang hat sie gesungen,
Und weil du sie gehört nicht hast,
Ist sie vom Baum gesprungen.
Da schlug ich mit dem leeren Zweig
An deine Fensterscheiben;
Heraus, heraus in das Frühlingsreich!
Er wird nicht lange mehr bleiben."

—*Wilhelm Müller.*

(*b.*) Give the first person singular of the present indicative, the first person singular of the imperfect indicative, the first person singular of the present subjunctive, and the past participle of the following: *erröten, nehmen, erwidern, können, verstehen, rufen, schlagen, blenden, bleiben.*

(*c.*) *Du* is used throughout in 1 (*a*) and 2 (*a*). State shortly when and why you would use the second person singular, and when and why you would use the second person plural, when writing modern German.

3. Translate into German:—

(*a.*) A spring morning is perhaps the most delightful time of the whole year. The cold, wet winter is past, and the sun is regaining its strength. The fields are becoming green again, the flowers are beginning to bloom, and everywhere there is new life. The birds are making themselves heard in the trees and hedges, and in Europe the nightingale sings the whole night through. There is, however, one disadvantage in a New Zealand spring: the wind is strong, and, in some parts of both the North and South Islands, blows almost continuously for several weeks. Trees bend and sometimes break, window-panes rattle, clouds of dust fly, and it is a difficult matter to walk about without losing one's hat. But, after all, these are small things, and, though strong winds may be unpleasant for the moment, they bring health and strength with them.

(*b.*)

DEAR SIR,—

One of my friends has told me that there will be a place in your office(1) vacant next Christmas. I wish to apply for it. I do not ask for any salary at first, as I shall be only a learner. I was born at Bremen in 1887, where my father was a doctor. After his death my mother decided to come to Hamburg, chiefly in order that my brothers and I might be educated in the excellent schools of that city. I spent several years in Dr. Weber's commercial school(2), and the latter will be good enough to answer any questions which you may wish to ask about me.

Hoping for a favourable answer,

I am,
Yours obediently,
M. G.

(1) Comptoir. (2) Handelsschule.

4. Translate into German:—

(*a.*) How did you sleep last night? Very well, thank you.
(*b.*) He told me that he came here at a quarter to five.
(*c.*) Can you show me the way to the next house?
(*d.*) We intend to leave town this day fortnight.
(*e.*) I am sorry to disappoint you, but I must do what I have promised.

Maori.—For Civil Service Junior. Time allowed: Three hours.

1. How is the present participle of the verb rendered into Maori? Give examples. State how the passive is formed, and supply the passive form of the following verbs: *Tahu, horo* (to swallow), *whao, patu, noho, whakaatu.*

2. Translate into English:—

Haere ki te whare. Aua koe e noho. Kia pai te hanga. I tangohia e ia. Kua ara moata maua. Kihai ia i kite. Tapahia kia roa. Mau e titiro. Nana i hapai. Mona tena kakahu. Ko te tau kotahi mano e iwa rau ma toru. Hei a Hurae nohohia ai te whare.

3. Translate into Maori:—

Your message has been received. My answer is, I am not able to consent to your request, because I shall be too busy at that time; but if you will write again to me, after I return, I will then consider your words. I saw Hone yesterday; I told him to take the horse to you. Has it reached you? You must take care of it, and give it water, but you must not ride it: it is too young. Tell Hone to come and see me when he returns.

4. Translate into English:—

Kotahi ano te waka i u mai ki te tai hauauru, ko Aotea. Ko te nuinga o aua waka i u ki te tai rawhiti. Ko etehi o nga tangata i noho tuturu ki taua tai; kotahi ano te waka i hoe mai ki te tai hauauru, ko Tainui. I rere mai taua waka, a ka u ki Otahuhu; katahi ka toia taua waka ma uta, a ka tae atu ki Manukau. Ka hoe tonu ki te puwaha o Manukau; ka puta ki waho ki te moana; hoe tonu ka u ki Kawhia. Katahi ratou ka noho tuturu ki taua wahi. Te taenga atu, ka keri i te mara, ka whakato i te kumara—ko nga kumara he mea uta mai i runga i te waka, no Hawaiki mai. I huaina taua mara ko Hawaiki; a, na te hoa-wahine a Hoturoa aua kumara i hari mai i Hawaiki. I tupu mai i aua kumara nga kumara katoa o te takiwa ki Kawhia, a tae noa ki tenei ra.

Ko Aotea waka, i u ki uta ki te taha ki te tonga o Aotea. No reira te ingoa o taua awa, no te waka nei. Ko Turi te rangatira o te waka. Ka mahue te waka ki reira. Ka haere mai a Turi ma ma uta; a ka noho ratou ki Patea, hei kainga tuturu ma ratou; a e noho nei nga uri o aua tangata ki taua takiwa i naianei.

Maori.—For Civil Service Senior. Time allowed: Three hours.

1. Put the following into Maori: The day before yesterday. The day after to-morrow. Last year. Next year. This is greater than that, but that is much better than this. That is the best thing of all. The man was overcome with sleep. If I had been there. When he arrives he will be able to decide.

2. Translate into English:—

Mona taua whare. Mana taua whare. He patu mona. He patu mana. (State the difference between *mona* and *mana*.) Nana i aha. Te peheatanga i whati ai. E taea te pehea. Ma te kuwahatia. Ko te hurianga i a Mataoho. Te korikori, te aha. Ora noa matou te tahuri.

3. Translate into Maori:—

Next came Te Pae-o-te-rangi with a party of seventy, twice told, of Nga-Puhi, who stayed at Roto-kakahi Lake, at the island of Motu-tawa. Here the Tu-hourangi tribe gathered to receive their guests, whilst their chief, Te Mutu-kuri, dressed himself in mourning garments and entered the house where the strangers were. Then was enacted the same scene as when Te Awaawa killed the Ngati-Paoa and others. Most of the Nga-Puhi were killed, but others escaped by flight. Te Pae-o-te-rangi was, however, killed. When the fugitives reached Ohine-mutu two of them were killed by the Ngati-Whakaue tribe, a few escaping to return north to Tokerau to relate their losses. This was in 1822. When the news spread to all parts of Nga-Puhi, great grief was felt by both great and small. The chiefs concerned left to Te Kiri-mate the decision as to the steps to be taken to avenge the deaths. He thought that the elder relatives of Te Pae-o-te-rangi should decide, saying, "Yes, leave it so: blood has flowed: do not let it get cold." That was the opinion of Te Koki and Ta-waewae. Then another of the elder relatives stood forth—Te Wera-hauraki—and said, "Let the words of you two not be adopted, but leave it till next year, so that dried *kumara* and fish may be obtained to support us." Nga-Puhi considered these words well, and finally concluded that Te Wera was right; and so the expedition of revenge was postponed until 1823.

4. Translate into English:—

Ka hoki te ope nei, a ka puta ki Te Aroha—ki Ohine-muri. Ko nga morehu o Ngati-Maru, ka haere ki Te Totara noho ai. A, he roa te wa; i te tau 1821 ka hinga ko Mokoia, ko Mau-inaina; kei Te Tamaki enei pa—no Ngati-Paoa. I hinga katoa i a Nga-Puhi; kotahi te pa i tahuri, ko Mokoia ia, a, i hui katoa nga tangata ki tetehi o nga pa. Ko Te Rauroha te rangatira whakahaere o te riri; a, ka mea atu ia, "Kaua e noho; me kahahi." He tauhou tenei mea te pu ki a Ngati-Paoa, koia i mataku ai ratou. I te atapo tonu ka maunu te pa nei, ka haere, ka ahu whaka-Waikato. Te taenga atu ki Horotiu, kua kiki tonu a reira i era atu mano, no reira ka whakatu te haere ki Patetere. I muri tata iho i a Mau-inaina—i taua tau ano—kua horo a Te Totara pa, i a Nga-Puhi. Kei Hauraki, kei Te Kauaeranga tenei pa. Ka mate i reira te iramutu o Te Whata-nui—a Whetu-roa; ka mamae rawa te ngakau a Te Whata-nui ki tona iramutu i mate huhua kore. Ka hoki a Nga-Puhi ki tona kainga; tae rawa ki raro, ka hokia mai; ka tika tenei ki roto o Waikato. Ko te pipinetanga o Waikato; ona mano, kei tona tino kohanga i tupu ai ona rangatira. Ko Matakitaki ka riria; a, ka nui te kaha o Waikato; engari, na te kai i patu, katahi ka horo—ki katoa nga maioro i te tangata mate. Ko te wa tenei i nga pu tuatahi, i tikina ai e Hongi i te tau 1820 ki Ingarangi, ki a Kingi Hori; a i tenei wa hoki ka tino maha te taenga mai o nga kaipuke patu-tohora o Marikena, harihari pu mai hei hoko kai ma ratou; a, ko nga tau ano hoki enei o aua riri, o Te Totara, o Matakitaki.

Arithmetic.—For Class E. Time allowed: Three hours.

1. Multiply 10 ac. 4 po. 27 sq. yd. by 423.

2. Reduce to a single fraction—$5\frac{2}{3}\frac{6}{9}\frac{3}{1} + 2\frac{1}{2}\frac{2}{2}\frac{5}{1} - 7\frac{1}{2}\frac{2}{9}\frac{4}{5}$

3. Express $\frac{2}{5}$ of £4 + $4\frac{3}{7}$ of 17s. 6d. + $1\frac{2}{5}$ of 5s. as the decimal of £12 7s. 6d.

4. A bucket filled with water weighs 55 lb.; when one-third of the water is emptied out the bucket and the remaining water together weigh 37 lb. 8 oz. Find the weight of the bucket when empty.

5. Find the number of feet in a side of a square piece of ground which contains three-quarters of an acre.

6. Find the compound interest on £3,715 for three years at 4 per cent. per annum, to the nearest penny.

7. The two temperatures known as "freezing-point" and "boiling-point" are denoted in the Fahrenheit scale by 32° and 212°, in the Centigrade scale by 0° and 100°, and in Réaumur scale by 0° and 80° respectively. Express the temperature of 98·2° Fahrenheit in the other two scales.

8. What weight of alloy must one melt down with 3 oz. 5 dwt. of pure gold and 2 oz. 8 dwt. of twenty-two-carat gold in order to produce a mass of eighteen-carat gold?

9. If the amount of wool exported in a certain year shows an increase of 7 per cent. on the export of the preceding year, and if the average price has risen from 9d. a pound to 11d., find the percentage of increase in the total value of the exported wool.

10. Explain by means of examples, as you would to a class of children, the two methods of subtraction known respectively as the method of "equal additions" (or "borrowing" and "paying back") and the method of "complementary addition."

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

1. Find the cost of 231 lb. 9 oz. 17 dwt. 20 gr. at £3 17s. 9d. an ounce.

2. Resolve 693, 686, 504, and 847 into their prime factors, and write down their L.C.M.

3. (*a.*) Prove that a fraction is not altered in value if a common factor is removed from numerator and denominator.

(*b.*) Investigate a rule for turning a circulating decimal into a vulgar fraction, using as an example $0{\cdot}2\dot{6}19047\dot{}$.

4. Simplify $\dfrac{3{\cdot}25}{14{\cdot}2} + \dfrac{0{\cdot}325 \times 0{\cdot}39}{0{\cdot}142 \times 3{\cdot}2}$

5. Taking the metre as 39·37 square inches, find the number of square metres in an acre.

6. What is the present value of £730 due at the end of five years, compound interest at 4 per cent. per annum being reckoned? Give the answer to the nearest penny.

7. A man bought an article and resold it, losing 3 per cent. on the transaction. If he had obtained £14 more he would have gained 4 per cent. What was the cost of the article?

8. A vessel, *A*, contains a certain volume of spirit, and another vessel, *B*, contains an equal volume of water. *A* is half emptied into *B*, and, after mixing, *B* is half emptied into *A*. This is done three times. Find the ratio of spirit to water in *A*.

9. Extract the square root of 1·7 to six places of decimals. Show how to find the last three figures by simple division.

10. A room three times as long as it is broad is carpeted at 4s. 6d. a square yard, and the walls are coloured at 9d. a square yard, the respective costs being £8 5s. $4\frac{1}{2}$d. and 4 guineas. Find the dimensions of the room.

11. Explain by means of a diagram the principles involved in multiplying a vulgar fraction by a vulgar fraction—*e.g.*, $\frac{5}{6} \times \frac{3}{5}$, *or* $\frac{5}{6}$ of $\frac{3}{5}$.

12. Give short methods for the following operations, and explain them briefly as you would to a class of children in Standard VI.:—

(*a.*) Multiplication of a number by 995.
(*b.*) Division by 125.
(*c.*) Division by 1·25.
(*d.*) Value (by practice) of 893 lb. at 17s. 10d. a pound.

Arithmetic.—For Civil Service Junior. Time allowed: Three hours.

A. All the work by which a result is obtained must be clearly shown, as no credit can be allowed for any result, however correct it may be, unless the method of obtaining it is given.

B. Take the ratio of the circumference of a circle to its diameter as 3·1416, and 1 yard as equivalent to 0·914 metre.

1. What is the greatest number by which 18407 and 10090 can be divided so as to leave remainders 16 and 27 respectively?

2. Reduce to its simplest form:—

(*a.*) $\dfrac{2\frac{1}{3} + 3\frac{1}{4}}{12\frac{3}{8} \text{ of } \frac{3}{3}\frac{2}{3} - 6\frac{5}{12}} + \dfrac{8\frac{2}{3} \text{ of } 4\frac{1}{16}}{18\frac{1}{12} - 11\frac{3}{8}} \div \frac{12}{161}$

(*b.*) (by decimals only, and to six places,)

$$\sqrt{\frac{0{\cdot}625 \times 0{\cdot}1875 \times 0{\cdot}005}{0{\cdot}016025 - 11{\cdot}75 \times 0{\cdot}0003}}$$

3. Find the value of $18\frac{1}{1}\frac{1}{3}$ yards $- 1\frac{9}{11}$ poles $+ \frac{6}{7}$ of $5\frac{4}{9}$ acres, and reduce the result to the fraction of $5\frac{2}{3}$ acres.

4. If $5{\cdot}65\dot{3}\dot{1}$ cwt. of lead cost £2·87, what must be given for $3{\cdot}9\dot{5}4$ lb.? (Answer to three places of decimals of a penny.)

5. If 144 lb. of one tea is mixed with 54 lb. of another tea valued at 2s. $0\frac{3}{4}$d. a pound more, and if the mixture is worth 1s. $11\frac{1}{4}$d. a pound, how much a pound is each tea worth?

6. If, when the bank rate is five per cent. per annum, the difference between the true discount and the banker's discount on a bill due six months hence is £1 5s., what is the amount of the bill?

7. The outside diameter of a circular bicycle track 5 yards wide is 190 yards: what will it cost to asphalt the track at 2s. 6d. a square metre? (Answer to the nearest penny.)

8. A and B working together can get through a task in $4\frac{2}{7}$ days, A and C can do the same work in $3\frac{3}{4}$ days, and B and C in 6 days: in what time ought each man to get through it working by himself?

9. A goods train is 18 miles ahead of an express train which travels at the rate of 75 miles an hour and overtakes it in 25 minutes: find the speed of the goods train.

10. A corn merchant bought 2100 quarters of wheat, which he sold so as to gain 30 per cent. on 925 quarters and $12\frac{1}{2}$ per cent. on the remainder. He had previously tried to sell the whole at a uniform advance of 25 per cent., which would have brought him in £176 1s. $10\frac{1}{2}$d. more than he actually received. How much a quarter did the wheat cost him?

11. If the total surface of a cube of coal amounts to 937·5 square decimetres, find its value, in decimal money, at £1 6 florins 2 cents a cubic metre.

Arithmetic and Algebra.—For Civil Service Senior. Time allowed: Three hours.

1. Find the number of pounds in a kilogramme (1000 grammes), given that a gramme is the mass of a cubic centimetre of water, that the mass of a cubic foot of water is 1000 ounces, and that 1 centimetre = 0·3937 inch.

2. If the mean velocity of a rifle bullet over a range of 1000 yards is 1342 feet a second, and that of sound is 1122 feet a second, what time will elapse between the moment when the bullet strikes the target and the moment when the report of the rifle reaches the target?

3. In 1888 an investor bought £10,000 of New Zealand 4 % stock at $96\frac{1}{4}$. In 1898 he sold out at $116\frac{7}{8}$ and invested the proceeds in $3\frac{1}{2}$-per-cents at 103. Find the alteration in his income.

4. A merchant took from a customer a bill for £56 10s., dated 3rd March, due in 100 days (without grace), at 6 %, and his banker discounted the bill on 1st June. How much did the merchant get from the banker?

5. A man wrote to London for a suit of clothes. The postage for his letter and for the parcel cost him 3s. 1d., and he paid a duty of 25 % *ad valorem*. How much did the tailor get if his customer paid £7 10s. in all?

6. Find the quotient and the remainder when $x^6 + \frac{1}{4}x^5 + \frac{3}{5}x^4 + 1$ is divided by $x^2 + \frac{1}{3}x + 2$; and find m so that $2x^4 - 3x^3 + mx^2 - 9x + 1$ may be exactly divisible by $x - 3$

7. Simplify:—

(i.) $$\frac{a+x}{(m+n)^3} \times \frac{x^2-y^2}{12} \div \left\{\frac{m-n}{(m+n)^3} \times \frac{x+y}{6(m^2-n^2)}\right\}$$

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

8. Solve—

(i.) $x^2 - x + \sqrt{x^2 - 7x + 8} = 5x - 6$ (explain the introduction of extraneous roots)

(ii.) $3x^4 - 20x^3 - 94x^2 - 20x + 3 = 0$

(iii.) $$\begin{cases} x^2 + xy = 2y^2 \\ x^2 + 2xy + 3y^2 + 4x + 5y = 15 \end{cases}$$

and find what condition must be fulfilled in order that the equations $px + q = rx + p$ and $qx + p = px + r$ may be satisfied by the same value of x.

9. Find the relations between the roots and the coefficients of a quadratic equation, and the condition that must be fulfilled in order that the equation may have equal roots.

If x_1 and x_2 are the roots of $x^2 - x - 1 = 0$, form the equation whose roots are $(x_1^2 + x_2^2)$ and $\left(\frac{1}{x_1^2} + \frac{1}{x_2^2}\right)$

Show that the pair of equations $y^2 = 4ax$ and $y = mx + \frac{a}{m}$ has equal roots whatever be the value of m.

10. A man's net income, after paying income-tax of 6d. on every pound over £300, is £700: what would be his net income if the tax were raised to $6\frac{1}{2}$d.?

11. A swimming-bath is 44 feet longer than it is broad. There is a distance of 9 feet from the edge to the dressing-rooms, which are all round the bath, and are themselves 9 feet deep. The whole floor space, together with the space occupied by the bath, has an area of 928 square yards. What are the dimensions of the bath?

Algebra.—For Class D. Time allowed: Three hours.

1. Find the value of—

$$\left(\frac{p}{sy} - \frac{y}{p}\right)\left(\frac{p}{zs} - \frac{z}{p}\right) + \left(\frac{p}{zs} - \frac{z}{p}\right)\left(\frac{p}{xs} - \frac{x}{p}\right) + \left(\frac{p}{xs} - \frac{x}{p}\right)\left(\frac{p}{ys} - \frac{y}{p}\right)$$

where $s = x + y + z$, $p^2 = xyz$, and $x = -1$, $y = 2$, $z = -4$.

2. Multiply the sum of $m^2 - 3mn + 2n^2$, $3n^2 - m^2$, and $5mn - 3n^2 + 2m^2$ by $m - n$.

3. Multiply together $a^2 - 2ab + 4b^2$, $a^2 + 2ab + 4b^2$, and $a^4 - 4a^2b^2 + 16b^4$.
4. Divide $6a^4 + 4b^4 - a^3b + 13ab^3 + 2a^2b^2$ by $2a^2 + 4b^2 - 3ab$.
5. Find the factors of—
   (1.) $x^4 - 7x^2 - 18$
   (2.) $1 + (b - a^2)x^2 - abx^3$
   (3.) $x^8 + x^4y^4 + y^8$
6. Explain and prove, as you would to a class of beginners, the following statements:—
   (1.) $a - (b - c) = a - b + c$
   (2.) $m(x + y + z) = mx + my + mz$

Use a diagram to illustrate this.

7. Simplify—
$$\frac{\frac{a}{n} - \frac{n-x}{a} + \frac{ax}{n^2 - nx}}{\frac{a}{n-x} + \frac{n-x}{a} + 2}$$
8. Prove that, if $b^2 = ac$ and $c^2 = bd$, then also $(b^3 + c^3)^2 = (a^3 + b^3)(c^3 + d^3)$
9. Simplify—
$$\frac{x^2 + x - 1}{x^3 - x^2 + x - 1} + \frac{x^2 - x - 1}{x^3 + x^2 + x + 1} + \frac{2x^3}{1 - x^4}$$
10. Solve the equations—
   (1.) $4[8x - 5(7 - 4x) + 9(6 - 3x) + 12x] = 7[20x - 2(7x - 10) - 2]$
   (2.) $\left.\begin{aligned} ax + by &= c \\ px + qy &= r \end{aligned}\right\}$
   (3.) $\frac{x^2 + 9x + 18}{x + 6} - \frac{x^2 - 9x + 18}{x - 6} = 22 - \frac{x^2 + 3x - 18}{x - 3}$

11. A steamer takes 4 hours less time to travel down-stream from A to B than up-stream from B to A. The steamer would travel in still water at the rate of 15 miles an hour, and the stream flows at the rate of $4\frac{1}{2}$ miles an hour. Find the time taken on each journey, and the distance from A to B.

12. To the cube of x is added fifteen times x; from the sum is taken seven times the square of x; and the remainder is then divided by the excess of x over unity. Show that if x is greater than unity the result must be positive in sign.

Elementary Mathematics.—For Civil Service Junior. Time allowed: Three hours.

1. (i.) Simplify—
$$\left(-\frac{2x}{y}\right)^3 \times \left(\frac{7ab^2c}{8x^2y^2z}\right) \div \left(\frac{-8abc}{7xyz}\right)$$
and explain clearly the reasons for each step in the process.

(ii.) Divide $x^6 + x^5y - 12x^4y^2 + 19x^3y^3 + 15x^2y^4 - 14xy^5 + 2y^6$ by $x^2 + 4xy - 2y^2$

2. Find the H.C.F. of $x^4 + 5x^3 + 11x^2 + 13x + 6$ and $x^3 - x^2 - 3x - 9$ and the L.C.M. of $(x^2 - 1)^2$, $x^2 - 3x + 2$, and $x^2 - 6x + 9$

Explain the principles upon which your methods depend.

3. Factorize—
   (i.) $3x^3 - 8x^2y$ (ii.) $x^3 + x^2 + x + 1$ (iii.) $64 - 12x - x^2$
   (iv.) $\frac{x^2}{4} - \frac{x}{y} + \frac{1}{y^2}$ (v.) $a^2 + 2ab + b^2 - c^2$ (vi.) $x^3 - 8$

4. Solve these equations, and in each case check the answer:—
   (i.) $5(x + 3) = 7(9 - x)$
   (ii.) $\frac{2(x+1)}{5} - 8 = \frac{3x}{16} - 1$
   (iii.) $\left\{\begin{aligned} \frac{x+y}{2} &= 4\tfrac{1}{2} \\ x - y &= 1 \end{aligned}\right.$

5. A and B were candidates for election, and A was returned by a majority of 119. If $\frac{1}{10}$ of those who voted for A had refrained from voting, B would have been returned by a majority of 31. To secure the return of B, what percentage of those who voted for A would have been required to transfer their votes to B?

6. The angles at the base of an isosceles triangle are equal, and if the equal sides be produced the angles on the other side of the base shall also be equal to one another.

A B C is a triangle in which A B = A C, and O is the middle point of B C. Two points, E and F, are taken in A B and A C (produced if necessary) at equal distances from A: prove that O E and O F are equal and make equal angles with A B and A C.

7. Through a given point draw a straight line parallel to a given straight line.

Give as many different constructions as possible and prove each case. Which is the most practical method, and why?

8. The diagonals of a parallelogram bisect one another.

Through a given point, P, draw a line so that the parts of it intercepted between two given lines, A B and A C, may be bisected at P.

9. Prove the geometrical theorem corresponding to the algebraical formula $x^2 + y^2 = 2xy + (x - y)^2$.

Show that if a given straight line is divided into two parts the sum of the squares on the parts is least when the line is bisected.

Euclid.—For Class D. Time allowed: Three hours.

1. If at a point in a straight line two other straight lines on opposite sides of it make the adjacent angles together equal to two right angles, these two straight lines shall be in one straight line.

Hence show that if OA, OB, OC, OD be four straight lines drawn in order from the point O, and if the angle AOB = the angle COD, and the angle AOD = the angle BOC, the straight lines AO, OC must be collinear, and in like manner BO, OD must be collinear.

2. If one side of a triangle be greater than another side, the angle opposite the greater side is greater than the angle opposite the less, and conversely.

Prove that of all the straight lines that can be drawn from an external point O to meet a straight line PQ, the perpendicular OM is the shortest.

3. If two triangles have two angles of the one equal respectively to two angles of the other, and the sides adjacent to the equal angles in each triangle equal to one another, then the triangles are equal in all respects. Prove this proposition by superposition, and also by the indirect method.

4. Explain how by cutting out paper you can show that any parallelogram is equal in area to the rectangle on the same base and of the same height.

Hence deduce the formulæ for (*a*) the area of a parallelogram, (*b*) the area of a triangle, (*c*) the area of a trapezium (*i.e.*, a quadrilateral with two sides parallel).

5. If a straight line be bisected and produced to any point, the rectangle contained by the whole line thus produced and the part produced shall be equal to the difference between the square on the line made up of the half and the part produced and the square on half the line bisected. Prove this geometrically and also algebraically. Name the geometrical figures in your diagram whose areas are expressed by the several terms of the algebraical formula obtained.

6. Describe a square equal in area to a given rectilineal figure.

7. D, E, F are the middle points of the sides BC, CA, AB of a triangle: show that the perimeter of the triangle ABC is greater than the sum of AD, BE, and CF, and less than twice the same sum.

8. ABCD is a quadrilateral: find a point P such that PA shall be equal to PC, and PB equal to PD.

9. ABCD is a parallelogram; the angle A is 60°, AB is 12 feet, AD is 10 feet: find to the nearest inch the length of AC. (You are not to use trigonometry.)

10. H is any point in the straight line AB; ABCD is a square on AB, and AFGH is a square on the opposite side of AH: show that DH is perpendicular to BF.

Geometry and Trigonometry.—For Civil Service Senior. Time allowed: Three hours.

1. Prove that the diagonals of a parallelogram bisect one another.

The perimeter of a triangle is greater than the sum of the medians and less than twice that sum.

2. Prove, by superposition or otherwise, that two triangles are equal (i) when they have two sides equal each to each and the angles between those sides equal; (ii) when they have two angles equal each to each and a side adjacent to the equal angles equal.

ABC is a triangle, and through A a straight line XY is drawn at right angles to the bisector of the angle BAC. Show that if P be any point whatever on XY, the perimeter of the triangle BPC is greater than that of ABC.

3. If a straight line is divided into two equal parts and also into two unequal parts, the rectangle contained by the unequal parts, and the square on the line between the points of section, are together equal to the square on half the line.

Describe a rectangle equal to the difference of two given squares.

4. Draw a tangent to a circle from a given point.

Through a given point, within or without a given circle, draw a chord of given length.

5. Prove, by superposition or otherwise, that in equal circles the angles that stand on equal arcs are equal.

If the two lines by which two vertically opposite angles are formed are chords of a circle, then either of the angles is equal to the angle subtended at the circumference by the sum of the two arcs that subtend the two angles.

6. If two triangles are equiangular they are similar.

P and Q are points in the circumference of a circle whose diameter is OA, and OL is drawn perpendicular to PQ. Show that the triangles OAQ, OLP are similar, and that OA : OQ = OP : OL.

7. Explain carefully what is meant by the circular measure of an angle, and find the relation between a radian and a degree.

Calculate the diameter of the sun, supposing that it subtends an angle of half a degree and that its distance is 90,000,000 miles.

8. Define the trigonometrical ratios of an angle, and prove that their values depend on the size of the angle and on nothing else. Find the trigonometrical ratios of 30°.

A man directly opposite a post on the other side of a stream walks 50 yards along the bank and finds himself directly opposite another post. If the line between the two posts subtends angles of 30° at both places of observation, find the width of the stream.

9. Prove:—

$$\text{(i.)}\ (1+\cot A+\tan A)(\sin A-\cos A)=\frac{\sec A}{\operatorname{cosec}^2 A}-\frac{\operatorname{cosec} A}{\sec^2 A}$$

(ii.) $\sin(A - B) = \sin A \cos B - \cos A \sin B$

(iii.) $\frac{\tan 5A + \tan 3A}{\tan 5A - \tan 3A} = 4 \cos 2A \cos 4A$

10. Find a formula for all the angles that have a given cosine.

Solve these equations:—

(i.) $\sqrt{3} \sin x - \cos x = 1$

(ii.) $2 \cos x \cos 3x + 1 = 0$

11. Prove that in any triangle—

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

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

(iii.) $\cos\frac{A}{2} = \sqrt{\frac{s(s-a)}{bc}}$

12. Show how to solve a triangle when two angles and a side are given.

To determine the height of the top C of a mountain a base AB of 5,300 ft. was measured on the horizontal plane. The angle subtended at A by BC was observed to be 50° 18′, and that subtended at B by AC to be 112° 32′; also, the angle of elevation of C was observed at A to be 48° 7′. Find the height of the mountain, given: L sin 48° 7′ = 9·8719; L sin 67° 28′ = 9·9655; L sin 17° 10′ = 9·4700; log 53 = 1·7243; log 12·35 = 1·0917.

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

[Illustrate your answers with diagrams.]

1. State the proposition known as the parallelogram of forces.

Two forces equal to weights of 16 grams and 24 grams respectively act on a particle in directions that make an angle of 60° with each other. Find their resultant.

2. Describe, with the aid of diagrams, three systems of pulleys, and show what is the mechanical advantage in each case.

3. Show how to find the resultant of two parallel forces acting on a rigid body in the same direction.

Two men support the ends of a bar 1·2 metre long, to which a weight of 100 kilograms is attached at a point 50 centimetres from one end of the bar. Neglecting the weight of the bar, find the pressure experienced by each man.

4. Find the magnitude of the horizontal force that will just keep a weight of 50 lb. from sliding down a smooth inclined plane whose base is 4 ft. and height 3 ft.

5. Show how to find the centre of gravity of a triangular piece of cardboard of uniform thickness.

6. What is expressed by the symbol g?

If a stone falls from a point 100 ft. above the ground, what is its velocity at the moment of reaching the ground?

7. Define the terms "momentum," "mass," "velocity," and "unit of force."

Establish the formula "momentum = mass × velocity."

Compare the unit of force that corresponds to 2 ft. as the unit of length with the unit of force that corresponds to 1 ft. as the unit of length.

8. Enunciate Newton's laws of motion, and give illustrations of each law.

9. If the specific gravity of ice is 0·925 and that of sea-water 1·025, how much of a piece of ice 3,000 cubic metres in volume will float above the surface of the sea?

10. Describe the Bramah press. On what principle is its construction based.

If the diameters of the two pistons be 3 centimetres and 40 centimetres, what weight can be supported on the larger piston by a pressure equal to a weight of 28 kilograms on the smaller?

11. When the mercurial barometer is standing at 765 mm., what would be the reading of an oil barometer, if the specific gravity of the oil is 0·925 and that of mercury 13·6?

12. When a barometer 36 in. high is standing at 30 in., $\frac{3}{4}$ cubic inch of air is introduced, and the mercury falls to 24 in. Find the sectional area of the tube.

Theoretical Mechanics.—For Civil Service Senior.

[Illustrate your answer with diagrams.]

1. What do you understand by uniformly accelerated motion?

A body moves with an initial velocity of V units of distance in one unit of time, which is increased by f units in every unit of time: establish the formula

$$v^2 = V^2 + 2fs$$

where v denotes the velocity at the end of t units of time, and s the distance traversed in the time t.

If a stone is thrown vertically upwards with an initial velocity of 29·25 metres a second, how high will it rise, and in what time will it return to its original level?

2. A stone is thrown with a velocity of 18 metres a second at an angle of 60° to the horizon from the top of a perpendicular cliff 30 metres high: at what distance from the base of the cliff will the stone reach the ground? Show how to find the position of the stone at the end of a given time.

3. Give a brief description of Attwood's machine.

Two equal weights of 6 oz. each are attached to the ends of a fine cord passing over a pulley. The weights are put in motion by adding to one of them a weight of 4 oz., which is removed without disturbing the motion after the weights have traversed a distance of 36 feet. Find the distance traversed in the next second.

4. Three whaleboats tow a buoy in directions E., N.W., and W. 30° S. respectively, at speeds of 4, 5, and 3 miles an hour: find the compass course of the buoy, and its position at the end of ten minutes.

5. The triangle formed by drawing lines from two adjacent corners to the centre of a regular pentagon of homogeneous cardboard is cut out: find the position of the centre of gravity of the remainder of the pentagon.

6. On two inclined planes of equal height h and of lengths a and b two carriages of weights P and Q are supported by a string passing over a frictionless pulley at the common vertex: find the acceleration, if any; and find the ratio of P to Q when there is equilibrium.

7. What is the mechanical advantage in a common screw press, when the screw has a pitch of $\frac{1}{8}$ inch and is turned by a lever 3 feet long?

8. A circular homogeneous table-top 5 feet in diameter and weighing 16 lb. rests on three points of support placed 2 feet apart at the angles of an equilateral triangle having the same centre as the table-top. What is the least weight that will just make the table-top tilt, and at what point must it be applied?

9. Show how to find the specific gravity of a mixture of two substances of given weights and specific gravities.

A substance whose specific gravity is 0·8 is dissolved in six times its own weight of water, and the specific gravity of the solution is found to be 1·025. Find the ratio in which the total volume has been reduced.

10. A cylindrical vessel having an inside diameter of 10 inches is filled with water. In what ratio must the height of the cylinder be divided into two parts, so that the total internal pressures on the upper and the lower parts of the curved surface may be equal? What must be the height of the cylinder, that the pressure on each of the parts may be equal to the pressure on the base?

11. A uniform glass tube 50 cm. long and closed at one end and containing 40 cm. of mercury is inverted and supported in a vertical position in a vessel of mercury. Find the volume of the air within the tube in these three cases:—

(*a.*) When the mouth of the tube is just immersed and the temperature is 10° C.

(*b.*) When the mouth of the tube is 25 cm. below the surface and the temperature is 10° C.

(*c.*) When the mouth of the tube is 25 cm. below the surface and the temperature is raised to 20° C.

Physics.—For Class D. Time allowed: Three hours.

1. Given a thermometer with no divisions on the stem, how would you proceed to provide it with the necessary graduation?

2. In what ways may the evaporation of a liquid be facilitated? Give reasons.

3. Define the term "specific heat," and explain how the specific heat of a substance may be measured by means of an ice calorimeter.

4. A vibrating tuning-fork when held over a narrow glass jar 7 inches in height causes resonance of the air in the jar. Explain this, and find the wave length of the sound emitted by the fork, and the number of vibrations which it makes in a second.

5. Describe some method by which the relative luminosity of two sources of light may be determined. What difficulties, if any, have you observed in making such comparisons?

6. Make a sketch showing the path of the rays of light emitted by a small luminous object and reflected from a concave mirror so placed that the object is between the focus and the centre of curvature of the mirror.

7. In making experiments with a gold-leaf electroscope it is essential that the metallic conductor carrying the gold leaves should be well insulated. What, in your opinion, is the best way of establishing this insulation? Explain the significance of Faraday's ice-pail experiment.

8. What is meant by the "polarisation" of a galvanic cell? Explain how this defect in an ordinary "copper-zinc-sulphuric acid" cell is largely avoided in the Grove cell and in the Leclanché cell.

Sound, Light, and Heat.—For Civil Service Junior. Time allowed: Three hours.

[A candidate may not answer questions from both sections of the paper. All answers should be illustrated, where possible, by diagrams.]

A.—Sound and Light.

1. Explain clearly how sound waves are originated by a vibrating tuning-fork, and how they are propagated through the air. What experimental illustrations tend to throw light on this matter?

2. Would you expect a sound to be conveyed through the air at the top of a mountain with the same velocity as on the plain below? Give reasons for your answer.

3. Why is it that a vibrating tuning-fork held over the mouth of a glass jar causes resonance only when the jar is of a particular height? If, with a given tuning-fork, the proper height of the jar is found to be 11 inches, what will be the vibration number of the fork?

4. How do you account for the fact that a total eclipse of the sun is visible over only a very limited portion of the earth's surface?

5. Show that when a ray of light falls upon a plane mirror, and the mirror is rotated through an angle α, the reflected ray moves through an angle 2α. What physical measurements are made by observation of this movement of the reflected ray?

6. How would you proceed to determine the radius of curvature of a given concave mirror?

7. Make a sketch showing the passage of the rays of light through a convex lens used as a simple microscope, with the eye near the lens.

8. Describe the arrangement of apparatus required in order to throw a spectrum on to a screen.

B.—HEAT.

1. State exactly how you would determine and mark the position of the upper fixed point (boiling-point) upon the stem of an ungraduated quicksilver thermometer.

2. What would you do to ascertain approximately the coefficient of linear expansion of a given rod of metal?

3. Give a careful explanation of some method of compensating the expansion of the pendulum or the balance-wheel of a clock. Why is this compensation desirable?

4. In what way does the thermal expansion of water differ from that of most other liquids? In what way does this peculiarity affect the freezing of large bodies of water?

5. How would you verify the statement that copper is a better conductor of heat than zinc?

6. Describe experiments which show that surfaces which absorb heat readily emit it with facility, while those surfaces which absorb little emit little.

7. Define the term "specific heat," and explain how the specific heat of a substance may be measured by means of an ice calorimeter.

8. Write a careful statement of the way in which you would determine the melting-point of a given sample of paraffin.

Sound, Light, and Heat.—For Civil Service Senior. Time allowed: Three hours.

[A candidate may not answer questions from both sections of the paper. All answers should be illustrated, where possible, by diagrams.]

A. SOUND AND LIGHT.

1. Describe the motion of the end of a prong of a vibrating tuning-fork. How may this motion be accurately represented graphically?

2. Explain the relation between the velocity of sound in air and the temperature of the air. What explanation has been given of the fact that sound is often audible at a greater distance at night than in the daytime?

3. Why is the pitch of a note modified by translation of the source of sound towards or away from the observer, as in the case of the whistle of a railway locomotive passing a person standing by the line?

4. Tuning-forks are often mounted on wooden boxes open at one end. What is the object of this, and what dimensions would you propose to give to the box in the case of a tuning-fork making 256 vibrations a second?

5. How is the luminosity of a source of light ordinarily measured? Give some description of the apparatus usually employed in practice. Show that, if two sources of light directly and equally illuminate a given surface, their luminosities are proportional to the squares of their distances from that surface.

6. At what distance from a concave spherical mirror of given focal length must an object be placed that the image may be half the size of the object?

7. Explain exactly how you would measure the focal length of a plano-concave lens.

8. Make a careful sketch of the arrangement of lantern, slit, lens, and prism required to throw a well-defined spectrum upon a screen. Show in your sketch the course of a pencil of the rays.

B. HEAT.

9. What do you understand to be the difference between hot water and cold water?

10. Explain exactly what you would do in order to determine the freezing-point on a recently made and not yet divided mercurial thermometer. How would you expect the position of the point to vary with the lapse of time?

11. What is meant by the apparent expansion of a liquid? Show that the apparent expansion is approximately equal to the real expansion less the expansion of the containing vessel.

12. A litre of dry air at 0° C. and 76 cm. pressure weighs 1·293 grams. At what temperature will a litre of dry air weigh exactly one gram when the pressure is 70 cm.?

13. Describe accurately the process you would adopt in order to determine the specific heat of tin by the method of mixtures. State the nature of the calorimeter, of the thermometer, and of the other appliances you would require.

14. Twenty grams of powdered ice are shaken up with a kilogram of turpentine, the temperature of which is 80° C. Find the final temperature of the mass, assuming that the latent heat of fusion of ice is 80 and the specific heat of turpentine 0·437.

15. A common experiment on thermal conductivity is to join two similar bars of different metals end to end, to attach small equal weights with wax to the further ends of the bars, and then to heat the junction of the bars by means of a flame. The wax melts at the end of one bar sooner than at the end of the other. Show clearly why such an experiment fails to afford any definite information as to the relative conductivities of the two metals.

16. Give some account of experiments which show that for a given kind of radiation the absorbing power of a surface is proportional to its radiating power.

Magnetism and Electricity.—For Civil Service Junior. Time allowed: Three hours.

1. How would you ascertain whether a wire nail which had been magnetised retained any residual magnetism?

2. What is meant by a "line of force"? Make a sketch of the lines of force in the field due to (*a*) a bar magnet, (*b*) a horseshoe magnet, (*c*) a bar magnet with a piece of soft iron near one of its poles.

3. What do you understand by the term "magnetic meridian"? If you were asked to mark on a table the position or direction of the magnetic meridian, what would you do?

4. State exactly how you would show that a thread of glass when dry is a good insulator, but that when moist it conducts electricity, and that a thread of fused quartz is an insulator whether dry or moist.

5. In making Faraday's ice-pail experiment, what effect, if any, would result from the presence of points on the outside of the ice-pail?

6. What is the object of amalgamating a zinc plate for a galvanic cell? Explain precisely how you would carry out the operation.

7. Describe a Daniell cell and a Leclanché cell. For what purposes is each of them best suited?

8. Describe the construction of an ordinary electric bell.

Magnetism and Electricity.—For Civil Service Senior. Time allowed: Three hours.

1. What hypotheses have been put forward to account for the magnetic properties of iron? What experiments may be made in support of any one such hypothesis?

2. Make a sketch of the lines of force in the field of a horseshoe magnet. What modification of the lines will result from the application of a keeper to the magnet? How would you ascertain whether a given steel ring was magnetised or not?

3. Explain how you would determine the declination (or variation) of the magnetic needle at a given place.

4. How could you conveniently ascertain which of two short threads was the better insulator?

5. How would you make a gold-leaf electroscope? Explain exactly how you would (*a*) cut out and fix the gold leaves, and (*b*) provide for the proper insulation of the conductor to which the leaves are fixed.

6. Define the C.G.S. electrostatic units of quantity, of potential difference, and of capacity. Show that the capacity of a sphere, the radius of which is 8 cm., is represented in this system of units by the number 8.

7. Describe De La Rive's floating battery, and explain the significance of the experiments usually made with this instrument.

8. A storage cell of 2 volts electromotive force and 0·5 ohm internal resistance is connected by thick wires to a galvanometer of 45 ohms resistance, and the galvanometer is provided with a shunt the resistance of which is 5 ohms: find the strength of the current flowing through the galvanometer.

9. Explain the meaning of the following terms: Board-of-Trade unit, kilowatt, three-wire distribution.

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

1. Describe any two experiments illustrative of the fact that chemical change does not involve any change in the total mass of the matter that takes part in it.

2. Explain in detail how you would ascertain whether a given metal is oxidized at ordinary temperatures (*a*) in moist air, (*b*) in dry air.

3. What are the chief properties of hydrogen gas? How would you show that the gas possesses each of the properties you mention?

4. What would be the weight and the volume (measured at normal temperature and pressure) of the gas resulting from the combustion of 10 grams of pure charcoal?

5. How would you prepare and collect a sample of ammonia gas, and how would you prove that it contained hydrogen?

6. In what respects do the properties of phosphorus resemble those of sulphur? How far does this resemblance extend to the respective compounds of these elements?

7. Some salts absorb water when exposed to the air, others lose water under the same circumstances. Describe the behaviour of sodium chloride, calcium chloride, potassium nitrate, sodium nitrate, and soda crystals in this respect.

8. What is the difference between white-lead and litharge, and how would you convert each of these substances into the other?

Chemistry.—For Civil Service Senior. Time allowed: Three hours.

1. In what way may physical conditions modify chemical reaction? Give instances of such influence of condition, and mention cases in which a change in the conditions may cause a reversal of the reaction.

2. Write a precise and detailed account of what you would do (*a*) to find the weight of copper which is equivalent to one gram of zinc; (*b*) to find the weight of copper which is combined with one gram of oxygen in the black oxide of copper.

3. A litre flask full of dry air is heated in an oven to 182° C. and closed with a tightly fitting stopper. It is then taken from the oven and surrounded with melting ice. What will be the pressure and what the weight of the air in the cold flask?

4. State the law which governs the volumes of combining gases, and describe any two experiments in illustration.

5. Explain exactly how you would estimate the amount of carbon dioxide in the air of a room. Describe, if you can, any special apparatus designed for this purpose.

6. Compare the properties of hydrochloric, hydrobromic, and hydriodic acid gases.

7. To what do you attribute the luminosity of a coal-gas flame. Describe experiments which may be made in support of your statement.

8. Give the formulæ of the chief oxides and salts of lead, and explain how you would prepare from metallic lead a small quantity of each of these substances.

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

[Illustrate your answers by diagrams, wherever possible.]

1. What experiments would you make to show the difference between a chemical compound and a mechanical mixture?

2. How would you prepare hydrogen gas? What experiments would you perform to show its properties?

3. What is meant by the temperature of a body? How would you proceed to graduate a thermometer. Express the temperatures 0° F., 54° F., and 39° F. in the Centigrade notation.

4. How would you proceed to show that the specific heat of lead is much smaller than that of water? Distinguish between specific heat and latent heat.

5. How would you set to work to measure the velocity of sound in air? Compare the velocities of sound in air and in water.

6. Define echo, pitch, and resonance.

7. Describe the construction and the use of the Leyden jar.

8. Describe the different ways in which pieces of (*a*) iron and (*b*) steel can be made into magnets.

9. Explain what happens when a ray of light is passed through a prism of glass.

10. Draw a system of pulleys, and show what is its mechanical advantage—neglecting friction and the weight of the rope and pulleys.

11. How do plants obtain their food?

12. Describe the position, form, and function of every organ that lies in contact with either surface of the diaphragm.

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

[Illustrate your answers with diagrams, wherever possible.]

1. What experiment would you make to illustrate the parallelogram of forces?

2. How would you obtain the "real coefficient of expansion" of mercury? When a liquid is heated in a glass vessel, what relation has its apparent to its real expansion? Establish an expression for this relation.

3. Show how the latent heat of steam may be measured.

4. Describe some experiments to show that sound is due to vibration.

5. A musical note is distinguished by pitch, intensity, and character: explain what is meant by each of these.

6. How would you make a voltaic cell? What changes take place within the cell when the external circuit is completed? How would you arrange a battery of six cells so as to maintain the largest steady current in an external circuit of given resistance?

7. Explain the principle of a dynamo-electrical machine.

8. Describe accurately the solar spectrum. What do you know of the laws of the refraction of light?

9. How would you prepare chlorine? Give an account of the changes that take place during the process. What experiments would you perform to illustrate the affinity of chlorine for other elements?

10. Give a brief account of the various forms in which carbon occurs. By what experiments would you demonstrate that they are forms of one and the same substance?

11. What relation has the quantity of fluid excreted by the skin to the weather? How is the variation compensated?

Geology.—For Civil Service Senior. Time allowed: Three hours.

1. What is meant by the "crust" of the earth? Give a full description of any typical portion of the earth's crust. Discuss the appropriateness of the term "crust."

2. Where are foliated schists found in New Zealand? What do you know of their mineralogical composition, age, and probable origin?

3. Why should the nature of the fossils that occur in any system of rocks be a satisfactory criterion of the age of the system?

4. A district of level land is found to be composed of stratified rocks, dipping W. 60°. The nature of the rocks changes gradually as they are traced from E. to W. from coarse conglomerate to fine shale. Towards the N.W. the shales are spotted, and in the extreme N.W. of the district contain crystals of chiastolite and staurolite. Trace the complete geological history of the district.

5. What is limestone? How is it distinguishable from marl and from marble? Describe the different ways in which limestone may be formed. Give any New Zealand examples with which you may be acquainted.

6. A given mineral belongs by its form to the cubic (isometric) system. Its colour is lead grey; specific gravity, 7·5; hardness, 2·5. In general form it is octahedral, but the edges are replaced by faces equally inclined to the adjacent octahedral faces. The corners also are replaced by other faces equally inclined to the four adjacent octahedral faces. Name the mineral, indicate the form of the replacing faces, and explain all the technical terms used in this question.

Botany.—For Civil Service Junior. Time allowed: Three hours.

[Illustrate your answers, wherever possible, by fully labelled diagrams.]

1. In a transverse section of any leaf enumerate in their proper order the "tissues" which will be cut through. Give a detailed account of the cells that are characteristic of each of these tissues.

2. Describe any experiments that will serve to demonstrate (*a*) that oxygen is given off, (*b*) that carbonic acid is absorbed, and (*c*) that starch is formed, under certain conditions. State what these conditions are.

3. By what means and from what causes does a green plant obtain the nitrogen, hydrogen, sulphur, and phosphorus necessary for its nutrition? Describe carefully the course taken by the fluid circulating in a plant, and the general character of the fluid in various parts of its course.

4. Write a brief essay on the dispersion of seeds.

5. Give an account of the methods by which you would study the general anatomy of a bean plant (or any other flowering plant), including, of course, the flower and seed.

6. Enumerate the characters of the order *Coniferae*, and briefly describe three representatives of the order native to New Zealand.

Botany.—For Civil Service Senior. Time allowed: Three hours.

[Illustrate your answers by means of careful and fully labelled diagrams.]

1. What are the chemical elements necessary for the life of any plant?

From what chemical substances are the essential food constituents obtained by *Haematococcus*, yeast, and *Bacterium* respectively?

2. Write an account of the life history of a liverwort. Point out the corresponding phases in the life of a fern and of a pine.

3. Write a detailed description of *Haematococcus* and of a cell of *Spirogyra*. State where you would find analogous cells in a flowering plant. Describe one such cell, and give an account of its physiology in relation to the entire plant.

4. Describe carefully, with the use of such technical terms as may be necessary, the flower of a typical orchid, and show how it differs from that of a lily.

[N.B.—Do not merely quote the characters of the two orders.]

5. Mention as many genera as you can of the native New Zealand representatives of the following orders: *Myrtaceae*, *Leguminosae*, *Scrophulariaceae*, and *Compositae*. Give the characters of these orders, and point out any peculiarities presented by the native genera.

6. Given a leaf and a piece of the stem of a plant, describe in detail the processes by which you would examine their internal structure. How would you demonstrate the presence of cellulose, lignin, starch, and albuminoids?

Biology.—For Class D. Time allowed: Three hours.

[A candidate may not answer questions from both sections of the paper. All answers should be illustrated, where possible, by fully labelled diagrams.]

A. Animal Physiology.

1. In what important respects does an animal differ from a plant?

2. Write an account of the lungs of man or some other mammal. Describe their position in the body, say how they are filled and emptied, and explain their functions.

3. Write a description of the form, structure, and disposition of any muscle concerned in the movement of arm or leg. What causes it to contract?

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

5. Give an account of the eye. State briefly the functions of its various parts.

6. Describe the elbow joint, the hip joint, or the knee joint.

B. Botany.

1. What is chlorophyll? Where and in what form does it occur in a flowering plant? State the function of chlorophyll, and give a careful drawing of a cell containing it.

2. Describe, with a careful and fully labelled drawing, a transverse section across the stem of (*a*) an annual plant, (*b*) a perennial plant. Give detailed drawings of the chief tissue-cells met with in such a section.

3. Give an account of the method of nutrition in a green plant. Describe an experiment which will serve to demonstrate the evolution of oxygen in sunlight.

4. What changes occur in the various parts of a flower as a result of the fertilisation of the ovule? (Take any of the *Rosaceae* as an example.)

5. How would you demonstrate to a class of students the germination of a seed, such as the bean? Describe the series of events observable to the naked eye.

6. Enumerate the general characters of the orders *Leguminosae* or *Ranunculaceae*, and describe three native representatives of each.

Elementary Physiology.—For Civil Service Junior. Time allowed: Three hours.

[Illustrate your answers wherever possible by diagrams.]

1. Briefly describe the structures that form the hip joint.

2. How can you distinguish between veins and arteries? Briefly describe the structure of each.

3. What is the diaphragm? Where is it situated, and what is its function?

4. Explain how you would dissect the eye of a sheep so as to show as much as possible of its structure.

5. Describe the structure of the walls of the stomach, and explain what changes take place in the food while it is in the stomach.

6. Describe the appearance and structure of the lungs of a sheep, or of any other mammal that you have examined.

7. What are the differences between muscle and tendon, and between bone and cartilage?

8. What is the normal temperature of the body? How would you ascertain it, and how is it maintained and regulated?

Physiology, and the Structure of the Body.—For Civil Service Senior. Time allowed: Three hours.

[Illustrate your answers wherever possible by diagrams.]

1. Draw a diagram showing the structures exposed in a section through the thickest part of the forearm, arranging them as nearly as possible in their proper relative positions.

2. Describe the position and the structure of the pancreas. State what you know of the pancreatic juice and the part it plays in digestion.

3. Sketch and describe a transverse section through the spinal cord of any mammal, and state what you know of the paths of the motor and of the sensory fibres in the cord.

4. Describe a typical animal cell, and explain the changes that take place when it undergoes indirect division.

5. Explain how you would obtain and mount for the microscope—(*a*) areolar connective tissue; (*b*) striated muscle; (*c*) blood. Describe briefly the appearance of each under the microscope.

6. Explain carefully how you would dissect the heart of a sheep so as to demonstrate the connection of its various chambers with the great blood-vessels.

7. Describe fully the liver of any mammal that you have examined. What do you know of the composition and function of the bile?

8. What is the coagulation of blood? Under what conditions does it occur? Describe any experiments that you could make bearing on the question.

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

1. What do you know of small-pox and of the precautions that are taken to prevent the introduction of it into New Zealand?

2. Enumerate and compare the various ways of cooking potatoes.

3. How would you cook and serve corned beef? Explain how you would make and cook a suet dumpling.

4. Classify the principal articles of diet, indicating the principle on which your classification is based. State what you know of the digestion of a typical example of each class.

5. What do you consider to be the best method of heating a schoolroom? Give reasons for your answer.

6. Briefly outline a lesson to the Fourth Standard on the importance of ventilation.

7. Compare woollen, cotton, and linen clothing in respect of their conductivity to heat and their hygroscopic characters.

8. Explain what is meant by (*a*) surface wells, (*b*) deep wells, and (*c*) artesian wells, and describe the geological conditions necessary for the formation of artesian wells.

Hygiene.—For Civil Service Senior. Time allowed: Three hours.

1. Explain the terms "mean duration of life" and "expectation of life," and show how they are calculated. What are their respective values as tests of the health of a nation?

2. What do you know of smallpox? What precautions are taken to prevent the introduction of it into New Zealand? Discuss the arguments generally used by antivaccinationists.

3. Explain the principles of house drainage. What is a "trap"? In what various ways may siphonage of a water trap take place, and how may it be prevented?

4. What are the objects to be aimed at in the disposal of the dead? Discuss the arguments for and against cremation.

5. Describe a method of ventilating an ordinary sitting-room. Describe and discuss the value of (*a*) Sherringham's valve and (*b*) Tobin's tubes.

6. What are the carbo-hydrates? Classify them, and discuss their value as foods.

7. What are the effects of exercise on (*a*) the lungs and (*b*) the heart, and what are the dangers of injudicious exercise?

8. What is the composition of ordinary coal gas, and what impurities does the gas flame add to the air of rooms? What are the advantages of the Welsbach incandescent burners?

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

1. It is stated that no seed could be obtained from the annual red clover (*Trifolium pratense*) in New Zealand before the introduction of the humble bee. Give a full explanation of this fact.

2. State any peculiarities you have noticed in the foliage of forage plants growing in very shady situations; also in the foliage of turnips affected by insect blight. Account fully for these peculiarities.

3. If a paddock of pasture, with heavy soil, in a dry district is overrun with twitch (*Poa pratensis*), explain fully how you would break it up and render it fit for a crop of oats. Give reasons for all the treatment you recommend.

4. Give any two instances that you have noticed of sour land. State what you know of the causes of the sourness. What methods would you in general adopt for sweetening sour land?

5. How would you demonstrate to a class the general effect upon plant life of (*a*) stagnant water, and (*b*) an insufficient water-supply? State what the effect would be in each case.

6. Explain why different manures are used for different crops. Give actual examples, with the quantities of manure to the acre.

7. Explain why (*a*) overdraining and (*b*) continual repetition of the same crop exhaust land. What effect would each of these exert upon a crop of wheat in a dry season?

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

1. Give one instance in each case of plants cultivated for the following: (*a*) fruit; (*b*) seed; (*c*) foliage; (*d*) root; (*e*) underground stem. Explain in each case the benefit that the plant would, if undisturbed, derive from the development of the organ specified?

2. In dry weather heavy soils frequently develop surface cracks. Discuss the possible causes and effects of this, and explain how the evil may be minimised?

3. How would you demonstrate to a class the action of capillarity in modifying the effect of evaporation?

4. Give the notes that you would use in giving a lesson on manures.

5. Describe any two instances you have seen of rotation of crops. Give the reasons for the particular rotation adopted, and discuss its advantages and disadvantages.

6. What are the general advantages derived from pruning apple trees? How would you prune (*a*) a tree ten years old that had never been pruned before; (*b*) a tree of the same age that had been regularly pruned; (*c*) a tree that had run to wood and bore little fruit; (*d*) a tree that bore much fruit but made little wood; (*e*) a tree badly blighted by the woolly aphis?

7. Why must nitrogenous manures be applied although the air contains large reserves of nitrogen? Why do some plants never require nitrogenous manures?

General Agriculture.—For Civil Service Senior. Time allowed: Three hours.

1. Name, with examples, all the plant organs you can that are used as storage organs Explain the advantage that the plant derives from the development of storage organs.

2. What is a soil? Explain the action of the various agents that cause the formation of a rich soil from a basaltic rock.

3. Explain the use of water in a soil. What method would you adopt for retaining moisture near the surface of a soil in dry weather, and explain the action of the method you would use? In what soils does excess of moisture occur? How may the excess be removed?

4. Define a manure. Why does rich vegetation often grow spontaneously on land that will not support a crop without manure? Compare the values and uses of farmyard manure, green manure, and superphosphate.

5. Describe and discuss the advantages of any particular instance of rotation of crops that you have seen.

6. Why are fruit trees pruned? How would you prune a peach tree, a pippin, and a cherry tree ten years old that had not been pruned in the previous season?

7. Give a short description of the construction of a drill for sowing wheat.

8. How should a flock of Shropshire ewes be treated and fed during a winter on heavy land where the grass has no feeding value?

Agricultural Chemistry.—For Civil Service Senior. Time allowed: Three hours.

1. What substances are commonly present in rain water? What effect, if any, has each of them upon an ordinary soil?

2. What is the effect of lime upon a soil? What would be the action of lime upon (*a*) ammonium sulphate, (*b*) superphosphate, (*c*) bonedust, (*d*) farmyard manure?

3. Much of the plant food in the soil is insoluble in water. Give as clear an account as you can of the natural processes by which this insoluble matter is rendered available.

4. What changes are effected in a soil by growing a crop and then ploughing it in? Under what circumstances are these changes most advantageous?

5. Give some account of the composition, uses, and sources of supply of the chief artificial manures.

6. How would you determine the amount of ash in a given sample of hay? What substances would you expect to find in the ash?

7. Explain the changes that take place in barley during the process of malting.

8. Explain the meaning of the term "albuminoid ratio" and its significance in estimating the value of a food.

9. What is the approximate composition of ordinary cow's milk? Explain exactly what happens when milk turns sour.

Geography.—For Class E. Time allowed: Three hours.

[Seven questions only are to be attempted.]

1. Explain clearly the effects of the revolution of the earth, and of the inclination of the earth's axis to the plane of its orbit.

2. State the causes that determine the climate of a place, and show briefly the influence exercised by each. Illustrate your answer freely.

3. Draw a map of Europe south of Paris, inserting the principal mountain ranges and rivers and twelve of the most important ports. Explain how the configuration of the various countries of Europe has influenced the character and the occupation of the different peoples.

4. Show the exact position of *ten* of the following towns (preferably by sketch), and state the causes to which they owe their position: Allahabad, Auckland, Bath, Birmingham, Broken Hill, Bremerhaven, Buenos Ayres, Chicago, Halifax, Johannesburg, Leeds, Nish, Suakin, Timbuktu, Wellington.

5. What are the trade routes between New Zealand and England, and how are these routes determined? Mention the probable cargoes of vessels trading between these countries, and also the ports of call.

6. Contrast, India, South Africa, Canada, and Australia in respect of density of population, annual value of imports and exports, and method of government. Account for the differences as far as you can.

7. Draw a map of Africa, showing the chief political divisions. Insert the chief rivers, and show the exact position of Alexandria, Atbara, Khartoum, Kimberley, Ladysmith, Mafeking, Mauritius, Pietermaritzburg, Sierra Leone, Tetuan.

8. Explain briefly the action of rain and rivers upon the land surface. Illustrate your remarks by reference to *two* of the following rivers, noting the effects of any physical peculiarities you mention; also make sketch-maps of the courses of the two you select, and show the positions of the chief towns in their basins: Clutha, Ganges, Nile, Rhine, Thames (England).

9. How would you teach a Sixth Standard class—

(*a*.) To find the north and south line?

(*b*.) To find the latitude of a place, say, from observations taken at noon at the time of the equinox?

(*c*.) Having a watch set to Greenwich time and an almanac giving the times of sunrise and sunset for any place, to find the longitude of the place?

Draw diagrams.

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

[Seven questions only are to be attempted; three at least of these must be taken from questions 1–4. Draw diagrams or sketch maps, where possible, to illustrate your answers.]

1. Explain the following statement clearly, as you would to a class of elder children: "The time-ball is dropped every week-day at 1 p.m., New Zealand mean time, which is equivalent to 13.30, Greenwich mean time of the previous day, being calculated for 172 deg. 30 min. east long., and 11 hrs. 30 min. east of Greenwich mean time."

2. Give proofs, suitable for a Standard VI. class, of the following facts: let your proofs be such that as far as possible they may be founded upon actual observation of the phenomena:—

(i.) Daily rotation of the earth.

(ii.) Annual revolution of the earth round the sun.

(iii.) Approximately stable position of the earth's axis.

3. Describe the formation of glaciers, and the action of ice in moulding the surface of the earth. Explain the terms névé (or firn), moraine, crevasse, roches moutonnées, glacial drift. How does a glacier accommodate itself to the irregularities of its course?

4. Account for the existence and direction of ocean currents. What is their influence on climate and on commerce? Illustrate your answer by referring to the currents of the Pacific.

5. Account for the differences in the density of population in France, Balkan Peninsula, Java, China, Switzerland, Nile Valley, Russia, Canada, Belgium, Hungary.

6. Give your views on the proposed scheme for Imperial reciprocity in trade. Let your answer include (*a*) the approximate value of British imports and exports, (*b*) the proportion of these imports that the colonies can supply, and (*c*) the proportion of the exports that the colonies can receive.

7. Compare the respective advantages of Great Britain, Germany, and the United States in the struggle for commercial supremacy. Make your comparison under the headings of (*a*) geographical position, (*b*) surface features, (*c*) natural resources, (*d*) popular education, (*e*) tariffs.

8. Give a description of *five* of the following places, mentioning, besides their exact position, any points of historical, artistic, or commercial interest, and naming any causes that have contributed to their importance: Aix-la-Chapelle, Athens, Benares, Cabul, Chicago, Liverpool, Mecca, Melbourne, Orleans, Quebec, Rome, Tokio, Venice.

9. Draw a map of South America; show the mountain ranges and the river systems; mark off the countries, and insert the chief town of each. Name the races found in South America, the chief occupations of the peoples, and their forms of government.

10. Give the approximate value of the five chief exports of our colony, the value of her imports, and state where she obtains the following articles: Tea, pepper, salt, sugar, tobacco, beer, wine, machinery, watches, kerosene.

Geography.—For Civil Service Junior. Time allowed: Three hours.

[NOTE.—Candidates are requested to answer only eight questions, choosing any four from each of the sections A and B. Sketch maps and diagrams should be used wherever applicable.]

SECTION A.

1. Serviceton is situated in 141° E. longitude, on the border of Victoria and South Australia: what is the true local time when it is noon at Greenwich? Explain carefully the reasons for your answer. When it is noon at Greenwich Observatory the clock on the Victorian platform at the Serviceton Railway-station marks 10 p.m., and that on the South Australian platform indicates 9.30 p.m.: account for the difference in time between the two railway clocks.

2. How do you account for the following facts:—

(*a.*) It is colder in winter than in summer.

(*b.*) More dew is deposited during clear calm nights than during cloudy or windy nights.

(*c.*) The high tides are higher at new moon and full moon than at any other time of the month.

3. Explain carefully the nature and origin of the following: *delta, volcano, estuary, continental island, cañon.* Give one clear example of each.

4. (*a.*) What is a barometer? Define *cyclone, isobar.* (Draw illustrative diagrams.)

(*b.*) At a certain place the barometer fell from 30·21 to 29·87: state clearly and exactly what is meant by this statement. What difference is observed in the readings of a barometer as you ascend a mountain? Explain why.

5. (*a.*) Explain why a river that flows through an alluvial plain generally has a winding course.

(*b.*) Choose one important river (*not* the Nile), and show how it has influenced the commercial and political development of the country through which it flows.

6. (*a.*) What is meant by *rainfall?* Compare the distribution of rainfall in New Zealand with that of Australia, and discuss the causes and the effects of any differences you note.

(*b.*) Describe a simple method of measuring the amount of rainfall.

SECTION B.

1. What are the resemblances and differences between North and South America as respects (*a*) mountains and river-basins, (*b*) people, and (*c*) climate?

Explain how far differences in the political, commercial, and industrial development of the two continents result from the points of difference that you mention under each of the above three heads.

2. (*a.*) Draw a map of Australia, not less than 6 inches wide, and mark on it the exact positions of the Australian Alps, Kangaroo Island, Lake Gairdner, Port Jackson, Lake Torrens, the Tropic of Capricorn, Spencer Gulf, Cape Leeuwin, the mouth of the Murray; and, by means of dots, Kalgoorlie, Ballarat, Coolgardie, Sydney, Albany, Port Darwin.

(*b.*) Describe (or show by sketch map) the Pacific Cable route from Australasia to Canada.

3. Write concise geographical accounts of Jamaica, Natal, and Bulgaria.

4. How do you account for the industrial and commercial superiority of the British Isles? Indicate the location of the cotton, woollen, and hardware manufacturing industries of England, and explain in each case the reason for the concentration of the industry in particular localities.

Discuss briefly the question whether Germany possesses any special advantage or advantages over England as an industrial centre.

5. What do you know of Mombasa, Buluwayo, Bagdad, Chicago, Erebus, Valetta, Caracas, Salonika, Niuchwang, Belgrade? State their precise positions.

6. Draw a map of India and Ceylon, about 6 inches wide, and mark clearly thereon the exact position of the Malabar Coast, the Punjab, the Ganges, the Jumna, Mount Everest, the Laccadives, the Gulf of Cambay, and indicate by dots the position of the towns Bombay, Delhi, Allahabad, Pondicherry, Madras, Peshawar, Colombo, and Trincomalee.

Add a note on the form of government of British India, and explain why the method of governing that dependency is not the same as the method followed with respect to the Colony of New Zealand.

Commercial Geography.—For Civil Service Senior. Time allowed: Three hours.

[NOTE.—Candidates are to attempt only *eight* questions.]

1. Illustrate by reference to (*a*) England, (*b*) the United States of America, (*c*) Australia, the effect that the natural productions of a country have upon its industries, upon the distribution of its population, and upon the character of its towns. [NOTE.—The term "natural productions" here includes *introduced* animals and plants.]

2. What is at present, approximately, the annual value of the imports and the exports of (*a*) the United Kingdom, (*b*) Canada, (*c*) Australia, (*d*) New Zealand? What inferences would you draw from an excess (*e*) of imports, (*f*) of exports?

3. What European and American countries have a centesimal currency? Express £100 approximately in each currency.

4. What are the chief goldfields of the world? What has been, approximately, the value of the world's annual output during the last seven years? What inference do you draw from these figures as to the probable effect on debtor countries, like New Zealand?

5. What countries export (*a*) frozen meat, (*b*) dairy produce, to Great Britain? Indicate, in the case of each country, the character, and, if possible, the approximate value, of the exports of these products to Great Britain, and mention any conditions that are likely to prove advantageous, or disadvantageous, to any of the countries concerned.

6. Mention the most important transcontinental lines of railway in the world, and indicate their commercial importance. Mention any important proposed transcontinental railways that are likely to be constructed.

7. Compare the customs tariffs of Great Britain and the United States of America, and, if you can, account for the difference between them.

8. Give, approximately, the population of each of the Australian States; say which have increased at the greatest, and which at the least, rate during the last ten years, and explain why.

9. What nations have possessions in Polynesia and Melanesia? Mention their several possessions, and show what effect this divided ownership has upon the trade of the Pacific.

10. Describe the distribution of population in New Zealand, and show how far the relative density or sparseness is due to (*a*) commercial considerations, (*b*) fertility of the soil, (*c*) presence of minerals, (*d*) other reasons.

11. Give a brief account of the chief geographical features of New Zealand, and show how far they have determined the direction and character of the main lines of internal communication of the colony.

12. What articles of New Zealand production are exported under special Government supervision? What are (*a*) the reasons, (*b*) the results, of such supervision?

English History.—For Class E. Time allowed: Three hours.

1. Describe the events which led up to the Great Rebellion.

2. What legislation dealing with religion was passed under Charles, under William III., and under George IV.?

3. What are the chief events in the conquest of India by the English?

4. What grievances had the American colonists against the English Government in the eighteenth century? Compare the relations of colony and mother-country then and now as to government, commerce, and taxation.

5. What was the origin of cabinet government?

6. Write notes on—Trial of the Seven Bishops, National Debt, Seven Years' War, John Wilkes, Fontenoy, Treaty of Utrecht, Hampton Court Conference.

7. Write a short account of either Oliver Cromwell or William III.

8. Mention some differences in the commercial policy of England under Elizabeth and under Victoria.

English History.—For Class D. Time allowed: Three Hours.

[N.B.—Seven questions only are to be attempted.]

1. What do you know of the occupation, religion, and government of the English before the Conquest? What changes in their condition were made by the invasion of 1066?

2. Give the provisions of *five* of the following measures; what conditions were they meant to remedy, and how far were they successful: Stamp Act, Triennial Act, Septennial Act, Magna Charta, Bill of Rights, Reform Bill of 1832, Reform of the Calendar, Corn Laws.

3. Trace the growth of English power in India, and describe the methods of government employed by the English there before the reign of Victoria.

4. Under what circumstances did England acquire the following possessions, and for what purposes has she used them: Canada, Cape Colony, Gibraltar, Malta, Tasmania, Newfoundland?

5. Describe the social and industrial condition of England between 1760 and 1837, and estimate the effects of the changes introduced during that period.

6. Draw a map of Spain and Portugal, marking the scenes of the chief battles and sieges during the Peninsular War, and numbering them according to chronological order. Also show clearly (*a*) why the war was carried into the Peninsula, and (*b*) what effect the defeat of Napoleon in the Peninsula had on the larger issue.

7. Name four of the ablest statesmen of the eighteenth century and of the first third of the nineteenth century. Sketch the policy of each, and show to what extent he influenced the life of his time.

8. Describe the religious and philanthropic movement of the eighteenth century.

9. Show clearly how the Revolution of 1688 transferred the sovereignty over England from the King to the House of Commons.

English History.—For Civil Service Junior. Time allowed: Three hours.

1. What difficulties had William III. to contend with after he became King of England? What were the chief events of his reign?

2. Describe the course of the rebellions of the two Pretenders.

3. Mention some of the chief men of letters who wrote in the reigns of Queen Anne and Victoria.

4. Write notes on Bosworth Field, Rye House Plot, South Sea Bubble, Star Chamber, Torres Vedras, Magna Charta, the Corn Laws.

5. Give some account of the War of the Spanish Succession

6. Give a brief outline of the life of Nelson or of Captain Cook.

7. What changes did the advance of science introduce into daily life during the nineteenth century?

8. Describe the course of the Reform movement.

General History.—For Civil Service Senior. Time allowed: Three hours.

1. Give some account of maritime discovery in the fifteenth and sixteenth centuries.
2. Compare the empires of Philip II. and Napoleon I., and show how each was acquired.
3. Give a sketch of the history of the Ottoman Turks in Europe in their relation to the other European Powers.
4. What revolutions in human thought were introduced by Copernicus, Newton, and Darwin?
5. Give some account of the revolutionary movements of 1848, and trace their causes.
6. Write short notes on the Concordat, Fronde, Peace of Ryswick, Berlin Decrees, Convocation of Notables, Diet of Augsburg, Hanseatic League, Thirty Years' War.
7. Describe briefly the growth of the Russian Empire from Peter the Great's time.
8. Comment on Bishop Berkeley's lines on the prospect of planting arts and learning in America:—

> "Westward the course of Empire takes its way;
> The first four acts already past,
> A fifth shall close the drama with the day;
> Time's noblest offspring is its last."

Constitutional History.—For Civil Service Senior. Time allowed: Three hours.

1. An English journal, referring to the Victorian strike, said that "the Commonwealth required a strong Governor who would do for it what Lord Milner had done for South Africa.' Comment on this statement.
2. It is said that absolute ownership of land is unknown to the English law. How does this view apply to the land system of this colony?
3. Give a brief history of cabinet government during the last two centuries.
4. Compare the taxation of Great Britain with that of New Zealand. What modification would a preferential tariff introduce?
5. What is the ordinary course of a public bill through Parliament? What measures are in New Zealand reserved for royal assent?
6. Give the chief steps by which the liberty of the subject has been achieved.
7. Compare the merchant-guild system with the industrial system of this colony.
8. What are the chief privileges of Parliament? How are they enforced?

Contracts and Torts.—For Civil Service Senior. Time allowed: Three hours.

1. (*a.*) A verbally engages the services of B as a clerk for a period of one year, the duties to commence one week from the date of the agreement, and either party to have the right to terminate the engagement by three months' notice, expiring at the end of the first six months: can B enforce the contract against A? Give your reason.

(*b.*) Where a contract for the sale of goods is required to be in writing, must the writing state the price? What exception is there to the rule?

2. What are the rules in regard to the validity or invalidity of contracts by lunatics and drunken persons?

3. (*a.*) A gives an order personally to C, an expressman, upon an express stand. A thinks that C is B, but this is unknown to C. C undertakes the order.

(*b.*) A posts an order for goods, addressed to B. C, who has taken over B's business, receives the order and sends the goods. A accepts them, thinking they have been sent by B.

A had in each of the above cases a special reason for wishing to deal with B. Discuss the question of his liability to C in each case.

4. What are the principal classes of cases in which contracts have been held void on the ground of illegality of object? What is the general principle upon which the validity or invalidity of a contract in restraint of trade depends? Illustrate this portion of your answer.

5. Discuss the question whether a breach by one party of some term of the contract, or a partial failure to perform the contract, will entitle the other party to consider himself discharged from performance, or further performance, of the contract on his part.

6. What are the remedies against an agent who contracts without authority? What is the law applicable where a contract has been entered into by an agent on behalf of a principal who was dead at the date of the contract, the death being unknown to the agent?

7. In what classes of torts is "malice" said to be an essential ingredient? How would you define "malice" in its present legal sense? In what classes of torts is neither malice nor negligence an essential ingredient.

8. What classes of torts are incapable of being committed against a corporation? How can a corporation commit a tort? What are the limits of its liability in this respect? Illustrate this part of your answer by cases.

9. What is the distinction between a servant and an independent contractor? Compare the liability of an employer for the wrongful acts of an independent contractor employed by him, with his liability for the wrongful acts of his servant.

10. What matters are required to be proved by the plaintiff in an action for malicious prosecution? What special rule is there in regard to the functions of judge and jury in such an action?

11. What is "negligence"? When is it actionable? Discuss the standard of care required in English law. When will "contributory negligence" of the plaintiff disentitle him to damages?

12. What must a plaintiff prove in an action for trespass to land? Under what circumstances is a man said to become a trespasser *ab initio?* What were the facts and the decision in the *Six Carpenters' Case?*

Life Insurance Law.—For Civil Service Senior. Time allowed: Three hours.

[N.B.—The regulations provide that the examination in this subject shall have special reference to New Zealand life and accident insurance law and to the Government Life Insurance Department.]

SECTION I.—LIFE.

1. Policy No. 7295, for £200, on the life of William Smith was assigned by him to his wife absolutely and for her sole and separate use. The wife, who died on 30th November, 1903, left two infant children, and had not disposed of the policy by will or otherwise. Whose property does the policy become?

2. In what securities may the funds of the Government Life Insurance Department be invested, and what proportions are prescribed?

3. A person insured for £1,000 dies leaving a will, which, after making provision for debts and bequeathing certain legacies, concludes with a residuary bequest in favour of the testator's widow. The will contains no reference of any kind to the life policy. Whose property does the policy-money become?

4. A policyholder notifies your company that he has lost his life policy, and desires a copy to be issued to take the place of the original. (*a*) What form of fraud has to be specially guarded against? (*b*) What precautions would you adopt before issuing the copy?

5. A life policy was mortgaged in June, 1885, to Samuel King. King died on 3rd September, 1885, and probate of his will was granted to his widow, Jane, on 19th September, 1885. Jane King died on 29th June, 1897, and probate of her will was granted on 22nd July, 1897, to her executors, Robert King and Andrew Bull. Robert King is dead, and a release of the mortgage is submitted for registration executed by Andrew Bull *solus*. Is the release by Bull effective, and would you be prepared to register the release of the mortgage?

SECTION II.—ACCIDENT.

6. Under the "accounts and audit" clauses of "The Government Accident Insurance Act, 1899," provision is made (*a*) for certain classes of payments to be made out of the "Government Accident Insurance Account" without further appropriation than the Act in question, and (*b*) for other payments to be made out of moneys from time to time appropriated from the account by Parliament. Mention what payments come under (*a*) and under (*b*) respectively.

7. Clause 5 of "The Employers' Liability Act Amendment Act, 1891," prescribes limitations to the compensation recoverable under the Act in respect of any one cause of action. What are these limitations?

8. In "The Workers' Compensation for Accidents Act, 1900," provision is made for any dispute arising under the Act being settled as an industrial dispute by the Arbitration Court constituted under the Industrial Arbitration Act. To what extent has this procedure been modified by "The Workers' Compensation for Accidents Act Amendment Act, 1903"?

9. What members of a worker's family are "dependants" within the meaning of "The Workers' Compensation for Accidents Act, 1900," and what additions are made by the Amendment Act of 1903?

Principles involved in Life Assurance: Life Assurance Book-keeping.—For Civil Service Senior. Time allowed: Three hours.

SECTIONS I. AND II.—PRINCIPLES INVOLVED IN LIFE ASSURANCE.

I.

1. Describe the usual form of a table of mortality, and say what are its uses.

2. What mortality tables are at present in use in the Government Insurance Department, and for what purposes?

3. Define (*a*) average duration of life and (*b*) mean age at death. Give the value of each in symbols.

4. What is the object of a valuation? Express in symbols, or describe verbally, the value of a policy when taken out, and its value after ten years' duration.

5. Explain briefly the "compound reversionary bonus" method of dividing surplus.

II.

6. What may be said for and against the automatic application of the surrender value to pay premiums?

7. What is a contingent debt? What form of contingent debt is offered by the Government Insurance Department to proponents for insurance who are not accepted as first-class lives? Describe any other variety with which you are acquainted.

8. How would you ascertain the average rate of interest earned by the funds of a life office during any year? What other method is there in use?

9. In what important respects do the policies issued by American companies differ from those generally adopted by Australasian companies?

10. A policyholder who was loaded up when accepted writes after a number of years asking for a remission of the extra premiums, giving as a reason that he has lived longer than was expected. Draft the letter which you think should be sent in reply.

III.—LIFE INSURANCE BOOK-KEEPING (with special reference to the Books of the Government Insurance Department).

11. Describe succinctly the functions of (*a*) the revenue account and (*b*) the balance-sheet.

[*N.B.—Special importance is attached to the candidate's showing an intelligent grasp of the underlying principles of these two subdivisions of the annual accounts.*]

12. Distinguish between the expressions "uncovered," "lapsed," and "expired."

13. In the course of an audit of one of the branch offices of the Department, what steps would you take to satisfy yourself that the renewal premium receipts on hand correctly represented the renewal premiums due and unpaid?

14. A half-yearly instalment of an annuity of £24 fell due on the 1st of January, 1903, and a cheque to meet the payment was despatched to the annuitant's address towards the end of December, 1902, with instructions to present it for counter-signature on or after the ensuing 1st January. Early in the month of January the cheque was returned, with an intimation that the annuitant had died on the 15th December. Subsequently payment of the annuity instalment, proportionately reduced, was made to the annuitant's executor. Enumerate all the general ledger postings which the original action and its subsequent correction would involve, and indicate precisely the lines in the annual accounts for 1902 and 1903 in which the transactions would appear.

Principles involved in the Selection of Lives for Assurance.—For Civil Service Senior. Time allowed: Three hours.

1. The mortality amongst the general population is usually greater in the towns than in the country districts. To what causes would you assign this difference?

2. (*a.*) Give a list of the principal questions contained in the Life Proposal Form.
(*b.*) Mention the points you would be specially on the look out for in the friends' reports.

3. State fully the cases in which the Office requires an extra premium, apart from the questions of health or habits; and discuss the advisability in each case of making the policy subject to a contingent debt in lieu of charging such extra rate.

4. Would medical examination be necessary if life insurance were made compulsory? Give reasons for your conclusions.

5. Discuss the importance of vaccination from an insurance point of view.

6. Define in non-technical language hemorrhoids, hemorrhage, irreducible hernia, and otorrhœa.

7. A life is found to be under the average, and cannot be accepted as a first-class risk under a whole-life table. Discuss the suitableness of a double-endowment assurance table to such a case without extra premium—
(*a*) Where the extra risk of death is increasing as the age advances;
(*b*) Where the extra risk remains constant;
(*c*) Where the extra risk is decreasing as the age advances.

8. How would you assess the following cases, and under what table do you think it would be best for an insurance office to take them:—
(*a.*) Age, 29; occupation, farmer; father alive, aged 63; mother dead, aged 46, of phthisis; no brothers or sisters living or dead; height, 5 ft. 10½ in.; weight, 12 st. 3 lb.; personal history, health and habits good.
(*b.*) Age, 27; occupation, bank clerk; father alive, aged 58; mother alive, aged 49; 5 brothers and 6 sisters living in good health, aged from 5 to 29; height, 5 ft. 9½ in.; weight, 9 st. 12 lb.; personal history, had rheumatic fever twelve years ago—no sequelæ.

9. Discuss the relative importance of a family history of (*a*) phthisis, (*b*) insanity, (*c*) cancer, (*d*) diabetes, (*e*) epilepsy, and (*f*) gout, in applications for insurance.

10. (*a.*) In what sense is consumption hereditary?
(*b.*) In what occupations is this disease most prevalent?

Writing.—For Classes D and E.

1. Write the following address, as on a foolscap envelope, on the five lines [*half an inch apart*] ruled below:—
G. Kenyon Parkins, Esq., M.A., B.Sc., Occidental Hotel, Lambton Quay, Wellington, New Zealand.

2. Write the words "Egyptian Pyramids" in such a hand that the small letters shall fit the space between the two lines [*one-third of an inch apart*] ruled below.

Shorthand.—For Civil Service Junior. Time allowed: One hour.

INSTRUCTIONS TO SUPERVISORS.

1. Inform the candidates before the time for taking up this subject that a candidate may use pen or pencil as he pleases for taking notes, which should be written in a ruled book, but that he must transcribe those notes into longhand with pen and ink in one of the ruled foolscap books provided.

2. Inform the candidates that the clearness and accuracy of the shorthand notes (which must in every case be handed in together with the transcript) will be taken into account by the examiner.

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

4. Dictate the passage at the rate of 80 words a minute.

N.B.—The matter to be read is marked off by thick lines into sections, each of which is to occupy a minute, and also by thinner lines into smaller sections, each containing the number of words to be read in a quarter of a minute.

Passage for Dictation.

[The passage takes 10 minutes.]

Before me lies an old octavo volume, now only to be found in libraries or picked up on the stalls | of secondhand book vendors. Yet it had its fashionable days when William the Fourth was king. The copy in my | possession is the fourth edition, and it was published by Smith, Elder, and Co., Cornhill, just one year before | Queen Victoria ascended the throne.
1 It is called "Random Recollections of the House of Commons, from the year 1830 ‖ to the year 1835," and it therefore covers the end of the unreformed and the beginning of the | reformed House of Commons. Moreover, the proceedings, as recorded, were enacted in the old House of Commons, which was burned | down in 1834.

"I shall not soon," says the narrator, "forget the disappointment which I experienced on the | first sight of the interior of the House of Commons. I had, indeed, been told that
2 it but ill accorded ‖ with the dignity of what has been termed the first assembly of gentlemen in the world, or with the importance | of the subjects on which they were convened to legislate. But I was not at all prepared for such a | place as I then beheld. It was dark, gloomy, and badly ventilated, and so small that not more than four | hundred out of the six hundred
3 and eighty members could | be accommodated in it with any measure of comfort. When ‖ an important debate occurred, but especially when that debate was preceded by a call of the House, the members were | really to be pitied; they were literally crammed together, and the heat of the House rendered it in some degree | a second edition of the Black Hole of Calcutta. On either side there was a gallery, every corner of which | was occupied by legislators; and
4 many, not being able to get even standing room, were obliged to lounge in the ‖ refreshment-rooms adjoining St. Stephen's until the division—when they rushed to the voting-room in as much haste as | if the place they had quitted had been on fire.

"The ceiling, the sides, and the ends of the House | were lined with wainscot. The floor was covered with a mat, and the seats of the members consisted of plain | benches, well
5 cushioned and covered with leather. From the floor backwards to the walls each seat was from twelve to ‖ fourteen inches higher than the one fronting it. The front row of benches on either side was within three feet | of the table. The row on the right of the Speaker was invariably occupied by the members of the Government | and their most influential supporters, and that on the left by the leading individuals of the Opposition. The table of | the House
6 was within five or six feet from the chair; in length it was six feet and in breadth ‖ four. . . . The Speaker's chair was raised twelve or fourteen inches from the floor of the House, and measured nine feet | in height. In form it somewhat resembled our modern easy-chairs, but had solid sides, and was covered over at | the top. It stood a few feet from the furthest end of the House, which was only fifteen or twenty | yards from the Thames. The Speaker always
7 entered by a door exclusively appropriated to himself at the end of the ‖ House next the river; while all the members entered by a door at the other end, in a straight line | with the chair. Immediately above the place where the members entered was the Strangers' Gallery, and underneath it were several | rows of seats for friends of members. To these seats there was no mode of admission except that of being | taken in by one of the members. To the
8 Strangers' Gallery a note or order from a member or the ‖ payment of half a crown to the door-keeper would at once insure admission. At the furthest end of the | passage, after we had entered the House, were several rows of benches, which extended on either side from the walls | to the passage. They were always occupied by members who professed to belong to no party—to be neither the | friends nor opponents of the Government, but who stood on
9 perfectly neutral ground, judging of measures only by their abstract ‖ merits or defects."

Gone are the cross benches, and if they remained there are none left to occupy them; for | who now professes to "judge of measures only by their abstract merits or defects"?

Two references only mark the progress | of the world. "There are," says our guide, "a few members belonging to the extreme Radical party who never change | their seats, whatever ministry may be in power, because no men sufficiently liberal for them have ever been
10 in office. ‖

Shorthand.—For Civil Service Senior. Time allowed: One hour and a quarter.

Instructions to Supervisors.

1. Inform the candidates before the time for taking up this subject that a candidate may use pen or pencil as he pleases for taking notes, which should be written in a ruled book, but that he must transcribe those notes into longhand with pen and ink in one of the ruled foolscap books provided.

2. Inform them also that the clearness and accuracy of the shorthand notes (which must in every case be handed in together with the transcript) will be taken into account by the examiner.

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

4. Dictate the passage at the rate of 130 words a minute.

N.B.—The matter to be read is marked off by thick lines into sections, each of which is to occupy a minute, and also by thinner lines into smaller sections, each containing the number of words to be read in twelve seconds.

PASSAGE FOR DICTATION.

[The passage takes 8 minutes.]

The twenty-third of March, 1903, will long be remembered in the history of the remote West Indian Colony of Trinidad. It witnessed one of | those terrible struggles that from time to time take place between the people and their rulers. It opened with the prospect of a constitutional and well | organized struggle for the right of public entry to the Council Chamber during the proceedings of the Legislative Council, and ended in violence and incendiarism on | the one side and in bloodshed on the other. For nearly an hour the mob stoned the whole building, which includes the Law Courts and many | other Government offices, and then set it on fire.

The proceedings of this memorable day began about eleven o'clock, when the Committee
1 of the Ratepayers' Association | presented themselves at the door of the Council Chamber, and demanded admission without tickets. They were refused, and after the display of just sufficient force to | constitute an assault they retired to hold a meeting in the adjoining square. At noon the proceedings of the Council began in the presence of about | thirty persons, some of them officials, who had obtained tickets. One of the Councillors immediately called attention to the illegality of the notice excluding the public, | and, having failed to carry his motion for the adjournment of the House, retired from the Council. Another member followed his example. Meanwhile the crowd outside | were engaged, some in holding a meeting and discussing plans for future action, others in marching round the building, singing the National
2 Anthem and beating drums | and tins so loudly as frequently to disturb the proceedings of the Council. At one stage a van drove up with the Council's luncheon, and the | driver called out to the crowd to "make way for the Governor's luncheon." This provoked the first real act of violence. The now excited mob declared | that if there was to be no water for them there should be no food for the Governor, and they took possession of the contents of | the van, and scattered them in every direction, breaking every plate and dish. Soon after they took possession of the Governor's carriage, smashed it to pieces, | and threw the unbreakable portions into the sea. They then stoned the building, breaking every window, and driving the clerks out of
3 the lower storey. The | members of Council sheltered themselves as best they could in the Council Room in the upper storey, not daring to come out and face the anger | of the mob. The lower storey being vacated and unprotected, the mob entered unmolested, made piles of paper and broken chairs and shelves, and set them | on fire. The building soon was ablaze, and the Governor and Councillors escaped as best they could, some protected by bodies of police, the majority unprotected. | In an hour or two the building was in ruins, although the fire-brigade station is immediately opposite. The police barrack on the other side of | the building also caught fire from the ejected sparks, but the fire did not extend beyond the tower.

4 The next serious stage in the events of | the day was the order to the police to charge the crowd, which was not given until the building was on fire. The police with shot | and bayonet quickly dispersed the crowd, killing eighteen and wounding about forty. Some of the flying crowd rushed into or broke into three large stores, evidently | for the purpose of securing guns, of which they are said to have obtained some. Fortunately at this juncture a body of marines was landed from | His Majesty's ship "Pallas," which had been lying in the harbour since the Venezuelan blockades; and the rioters seeing this ceased their looting and dispersed. When | the rioting began the leaders made several attempts to check the violence, but the mob was,
5 as might have been expected, entirely beyond their control. Whether | the attack of the mob was a well-organized attempt to inflict corporal punishment on certain members of Council, or whether one step merely led on | to the next, will probably never be known.

The circumstances that led up to these deeds of violence are connected with the water-supply of Port | of Spain. Some of them are of long duration, others are of comparatively recent occurrence. The water-supply has for many years been insufficient for the | requirements of the largely increased population, and in the dry season has had to be cut off for several hours during the day. Steps had been | taken to remedy this, and a sum of £57,000
6 had been expended in obtaining an additional supply. As soon as the supply from | the new sources had been connected energetic measures were adopted to prevent waste. Some steps were undoubtedly necessary, but the people strongly objected to their pipes | being cut. The supply of water for flushing the drains was discontinued, and the Town Commissioners protested against this on account of the danger to the | public health. These measures, together with certain rumours as to the failure of the wells to give the quantity expected, rightly or wrongly, created an impression | that the money spent in endeavouring to obtain the additional supply had been wasted. Two other features lent acuteness to this impression—viz., the very high | insurance rates and the introduction of the sewerage system into the town. After the big fire
7 of 1895 the insurance rates (already 15s. | to 20s. per £100) were raised 50 per cent.; after the fire of last year these were again raised 25 per cent. Special | efforts were made to remove the last 25 per cent., and on the assurance by the Governor that a good supply was forthcoming the insurance | companies agreed to suspend it for six months. The period of suspension will expire on the eighteenth of April, and this explains the anxiety displayed by | the Chamber of Commerce for a commission of inquiry. This was purely a monetary question. On the other hand, those interested in the health of the | town welcomed the introduction of the sewerage system, but viewed with anxiety the possibility of the water-supply being cut off
8 for several hours a day. |

Book-keeping.--For Civil Service Junior. Time allowed: Three hours.

1. From the following particulars write up a Cash-book, ruled in the form which you consider the most suitable:—

1903.		£	s.	d.
Jan. 1	Balance of cash in bank on this date	363	15	0
2	Received from James Edwards payment of his account	5	14	6
3	Received from Arthur White payment in full settlement of a debt of £107 18s.	105	14	0
4	Lodged in bank	100	0	0
5	Paid Jones & Co. in cash (they allowed 1s. discount)	1	5	0
8	Paid office-cleaning by cash	0	12	6
12	Paid wages by cheque	33	7	6
14	Received for cash sales	18	18	0
18	Made sundry purchases of goods, drawing one cheque for same	38	10	0
22	Paid Jones & Co. by cheque (receiving a discount of £4 4s.)	159	10	0
30	Paid all cash on hand into bank.			
	Drew and sent out the following cheques:—			
	Evans & Blank (who allowed discount 18s.)	35	0	0
	Edgar Jackson, on account	150	0	0

2. On receiving the Pass-book from the bank on 31st January it is found that of the cheques mentioned in the foregoing question Edgar Jackson's (£150) and Jones & Co.'s (£159 10s.) have not been presented for payment. Make a reconciliation statement showing the balance at bank on 31st January.

3. Give definitions of the following terms: Insolvency, freight, interest, *pro formâ* invoice, acceptance.

4. A storekeeper carries on his business in three departments—viz., grocery, hardware, and drapery. Purchasers often buy on the same day goods from all departments. Rule a form of Sales-book which you would recommend the storekeeper to adopt, and enter therein six sales made on 14th March, 1903.

5. From the following Ledger balances on 31st March, 1903, make out Trading Account, Profit and Loss Account, and Balance-sheets for the year:—

	£		£
J. Starkey	153	Edward Short	128
W. Swift	42	J. Langford	27
Bills receivable	1,364	Bills payable	897
Goods, 31st March, 1902	2,000	Sales	5,080
Purchases	3,530	Capital: E. Bruce	780
Salaries	355	Capital: J. Wallace	750
Trade expenses	218		
	£7,662		£7,662

Goods according to stock-sheets, 31st March, 1903, £1,587.

The partners divide profits equally.

6. Henry & Edwards, of Dunedin, have received a consignment of 1,000 bags of wheat from William Hodge by rail. They sell it at 3s. 6d. a bushel, and the weight is 107 tons 10 cwt. Bags are to be weighed in. Railage (£31 5s.), unloading (£7 12s. 6d.), and cartage (£6 15s.) are paid, and commission is charged at 2½%. Make out Account-sales. [NOTE.—A bushel of wheat is regarded as weighing 60 lb.]

Book-keeping, I.—For Civil Service Senior. Time allowed: Three hours.

1. What is the imprest system of petty cash? Rule a Petty-Cash book, and enter therein two sums received and twelve sums disbursed under this system.

2. Explain the following: Bill of sale, demurrage, sinking fund, free of particular average, inscribed stock, appropriation of payments.

3. From the following trial balances for the year ending 31st December, 1903, taken from the books of Messrs. White & Black, prepare Trading Account, Profit-and-Loss Account, and Balance Sheet:—

	£		£
Sundry debtors	3,780	Sundry creditors	5,325
Stock, 31st December, 1902	5,587	Bills payable	1,338
Purchases	21,836	Sales	27,385
Charges	959	Bills discounted	4,135
Wages and Salaries	1,931	John White: Capital	5,250
Discount	181	William Black: Capital	3,750
Travelling-expenses	511		
Bills receivable	4,575		
John White: Drawings	348		
William Black: Drawings	256		
Furniture and Fittings	369		
Freehold property	6,850		
	£47,183		£47,183

Stock, 31st December, 1903, £5,436.

Provide 2% discount on undiscounted bills and book debts.

Reserve 5% on current bills receivable and book debts as a provision for bad and doubtful debts.

Allow for depreciation on furniture and fittings £37, and on freehold property £137.

Credit partners with 6% interest on capital, but charge no interest on drawings.

Divide net profit in proportion of ⅗ to White and ⅖ to Black.

4. Rule a form of Cash-book which you would recommend for use in the office of a Borough Council whose principal receipts consist of the following rates: General, Special, Library, and Charitable Aid. There are also receipts from time to time on account of rents and dog-taxes. The expenditure may be classified under the headings Maintenance, Office Charges, Salaries, and General. All receipts are paid into bank, and all payments made by cheque.

If two Ledgers are kept—viz., General and Ratepayers'—show how the information contained in the Cash-book should be posted into both Ledgers.

Book-keeping, II.—For Civil Service Senior. Time allowed: Three hours.

1. A firm has two bank accounts—viz., Ordinary and Trust. In the Cash-book each bank account is given a separate column. It is found that the Trust Account contains a surplus of £213. Describe the process by which this amount may be transferred to the Ordinary Account. Should the Ledger contain any record of the transfer?

2. Explain the difference between a Suspense Account and a Reserve Account.

3. Under what circumstances is it usual to endorse a bill "without recourse." Give an example of an acceptance payable to the order of the drawer, duly accepted, endorsed on the reverse side by a friend of the acceptor; also having two other endorsements. Which endorsement should be "without recourse?"

4. A company is registered in 1902 with a capital of 50,000 shares of £1 each. Up to 30th June, 1903, 40,000 shares have been issued, 10,000 being fully paid up, and 30,000 having been called up to 10s. a share. There are calls unpaid amounting to £325. All the cash received on account of share capital has been posted from the Cash-book to the credit of one Capital Account in the Ledger. It is required that the Ledger give fuller information. Show the Journal entries required in order that the Ledger may give, by separate accounts, the position of the share capital.

5. Johnson & Smith forward a consignment of 1,000 sacks of oats to their Sydney agents, Herbert, James, & Co., and draw against the same £450, at thirty days. The draft is accepted on 6th October. Prepare the Sydney firm's Account-sales from the following particulars:—

Sales.—300 sacks = 1,250 bushels, sold on 7th October, at 3s. a bushel, bags in, ex ship, for cash.

500 sacks = 2,080 bushels, sold on 30th October, at 3s. 3d. a bushel, bags in, in bond, for bill at one month.

200 sacks = 840 bushels, sold on 28th November, at 3s. 2d. a bushel, bags in, in bond, for cash.

The following charges were paid by Messrs. Herbert, James, & Co.:—

Freight, £50; wharfage and customs entries, £12 10s.; cartage, £5 5s.; weighing, 17s. They charge commission and brokerage in one sum, 2½ %.

The Account-sales is dated 28th November. It is required to show the average due date.

Prepare also a statement of account, with interest at 7%, to 28th November.

The balance was forwarded by sight draft to Messrs. Johnston & Smith, exchange being at ½ %. Show the amount of this draft in the statement of account.

Precis-writing and Correspondence.—For Civil Service Senior. Time allowed: Three hours.

Answer all questions. Avoid redundancy Write legibly.

QUESTION 1.—*PRÉCIS*-WRITING.

Write a *précis* of the following despatches and enclosures:—

SIR,— Government House, Wellington, 15th January, 1900.

I have the honour to inform you that some appeal seems to be necessary from the judgments of the High Court, Rarotonga. As it exists at present I am advised that there is no appeal to any Court, nor to the Governor of New Zealand.

(2.) As was to be expected at the first institution of the Court, there have been a large number of cases, and Colonel Gudgeon has in each case sent me a copy of the evidence and his decision. I consider that the judgments have been extremely fair and without partiality, and that he has filled his difficult position in an exemplary manner. The persons convicted have in almost every case appealed to me; one case, however, involved an important principle, "Kohn *v.* The Union Steam Ship Company of New Zealand," which has clearly demonstrated to me that some appeal is necessary.

(3.) There seem to be three courses possible, if an appeal is allowed: (1) An appeal to the High Commissioner, Western Pacific; (2) an appeal to the Supreme Court of New Zealand; (3) an Appeal Court to be held as required at Rarotonga by a New Zealand Judge.

(4.) As the affairs of the Cook Islands are to a large extent under the Governor of New Zealand, I am strongly in favour of the adoption of either the second or the third suggestion. The second course would enable the Governor to keep himself thoroughly acquainted with the operations of justice there, but it would necessitate either the boundaries of New Zealand being made to extend beyond the Cook Islands, or a special (British) Act of Parliament to enable the cases to be heard

in our Supreme Court. The third course would be the simplest, and would only necessitate an alteration in the High Court Act (Cook Islands). My Government is desirous to meet your wishes as far as possible in this matter, but if the Appeal Court were held in Rarotonga the expenses incurred by the Judge would have to be met by the Cook Islands.

(5.) In conclusion, I would point out that the High Court as at present constituted—the British Resident being Chief Justice, with no appeal—places absolutely autocratic power in the one individual's hands, and it is somewhat difficult for him to carry out the double office, first, as Adviser to the Cook Islands Government, when he may have to recommend a prosecution, and, secondly, as Chief Justice, to decide the case in Court.

(6.) Needless to say, such a case should not be permitted, but as there is no means of providing a suitable salary for a Chief Justice, and the British Resident performs the work gratuitously, it has been the only course open. Neither is there in these islands any person who, even if a modest salary were forthcoming, would be fit to hold such an appointment. The British Resident has himself expressed the difficulties of the position.

(7.) I should be glad to be further informed whether the prerogative of mercy rests with the Governor of New Zealand.

I have, &c.,
RANFURLY.

The Right Hon. J. Chamberlain,
Secretary of State for the Colonies.

MY LORD,— Downing Street, 6th April, 1900.

I have the honour to acknowledge the receipt of your despatch of the 5th January, suggesting the establishment of a Court to which appeals can be carried from the High Court of the Cook Islands.

I agree with you as to the desirability of providing a Court of Appeal, and I am of opinion that the appeal should lie to the Supreme Court of New Zealand. An Act passed in the Cook Islands will be sufficient to effect this purpose, whether a New Zealand Judge visits the Cook Islands or (a course which I should prefer) the trial of the case on appeal takes place in New Zealand.

Your question as to the prerogative of mercy is difficult to answer, except as regards cases tried before the Resident in his capacity of Judicial Commissioner; for such cases the prerogative is vested in the High Commissioner for the Western Pacific by section 80 of the Pacific Order in Council of 1893, of which a copy is enclosed. The best course will probably be to enable the Chief Justice of the Cook Islands, by an amendment of the High Court Act, to send any criminal cases for trial to the Commissioner's Court. When he possesses this power he should exercise it in all cases of importance, and it would then be possible to provide a satisfactory settlement of the difficulty by an amendment of the Pacific Order in Council to the effect that in cases tried before the Judicial Commissioner the powers mentioned in clause 80 of the Order in Council shall be exercised by the Governor of New Zealand.

It will probably be desirable to make a further amendment of the Order in Council, in order to provide for an appeal to the Supreme Court of New Zealand from the judgments of the Judicial Commissioner in whose Court cases in which Europeans are concerned are tried.

I shall be glad to learn whether your Ministers concur in these suggestions.

I have, &c.,
J. CHAMBERLAIN.

Governor the Right Honourable the Earl of Ranfurly.

SIR,— Government House, Wellington, 12th July, 1900.

In reply to your despatch of the 6th April, 1900, relative to the question of a Court of Appeal for the Cook Islands, my Government considers that it is better to leave this question over, pending Her Majesty's decision as to the annexation of this group and the possible extension of New Zealand boundaries to include these islands.

I have, &c.,
RANFURLY.

The Right Hon. J. Chamberlain,
Secretary of State for the Colonies.

SIR,— Government House, Wellington, 29th September, 1900.

I have the honour to inform you that both Houses of the Legislature of New Zealand have passed the enclosed resolution regarding the extension of the boundaries of the colony.

I propose to leave to-morrow, the 30th September, in H.M.S. "Mildura," to inform myself as to the aspirations of the inhabitants of the various islands in the Cook Group, and Savage Island, and I propose, should I deem it to meet the views expressed in your despatches, to proclaim them annexed to Great Britain and to hoist the British flag.

I have received in the past few days further petitions desiring annexation, and I believe that this is the true desire of those islands with which I am personally acquainted.

I have, &c.,
RANFURLY.

The Right Hon. J. Chamberlain,
Secretary of State for the Colonies.

Enclosure.

THAT, whereas it is desirable, in the best interests of the colony and of the inhabitants of certain islands of the Pacific hereinafter mentioned, that those islands should be annexed to this colony, this Council therefore approves of the alteration of the boundaries of this colony, and consents to

the extension of the said boundaries so as to include the Cook Group, including the Islands of Rarotonga, Mangaia, Atiu, Aitutaki, Mitiaro, Mauke, Hervey (Manuae); also the following islands: Palmerston (Avarau) Savage (Niue), Pukapuka (Danger), Rakaanga, Manihiki, and Penrhyn (Tongareva).

SIR,— Government House, Wellington, 29th September, 1900.

I have the honour to inform you that in case of the annexation of any of the Cook Islands, and Savage Island, and declaring therein Her Majesty's sovereignty, &c., I shall in the Proclamation announce that all laws shall continue and the administration proceed as heretofore, pending Her Majesty's Government making other provisions. I have, &c.,

The Right Hon. J. Chamberlain, RANFURLY.
Secretary of State for the Colonies.

SIR,— H.M.S. "Mildura," Lyttelton, 31st October, 1900.

I have the honour to inform you that, in conformity with your instructions, I started from Wellington in H.M.S. "Mildura" (Captain Baynes, R.N.) on Sunday, 30th September, and proceeded direct to Rarotonga, which island we reached on Saturday, 6th October (western time), at 4.30 p.m.

The British Resident, Colonel Gudgeon, came on board, and we then arranged the order of procedure.

On Monday, 8th October, I landed at 11 o'clock, and addressed the chiefs and inhabitants, who had assembled to the number of about two-thirds of the population. I then left the chiefs to consider the question, and to send their reply to me on board H.M.S. "Mildura." At about 12.30 p.m. I received a reply that they were unanimously in favour of annexation, at the same time sending to me a formal cession of Rarotonga, also of the Islands of Atiu, Mauke, Mitiaro, and Takutea, which exclusively acknowledged Ngamaru as their chief. At 1.30 p.m. I officially landed to perform the ceremony of annexation, Captain Baynes landing a guard of honour of the Royal Marines, of sailors, and a drum and fife band. I then read the Proclamation accepting the cession, and the Proclamation of annexation, including the Hervey Group, Captain Baynes hoisting the Union flag, and the "Mildura" saluting with twenty-one guns, the ceremony concluding with three cheers for Her Majesty the Queen. The leading chiefs then expressed their gratification at the annexation, which had taken place without a single dissentient.

I consider Lieut.-Colonel Gudgeon to deserve much praise for the manner in which he has successfully overcome all the difficulties since his appointment. The most troublesome of the Europeans, finding there was a firm hand directing affairs, and that offenders could not go unpunished, have now mostly left the island. There is no doubt that he enjoyed the full confidence of Natives and Europeans alike.

The Rev. Mr. Cullen, the London Missionary Society's representative at Mangaia, requested me to grant him a passage from Rarotonga. Colonel Gudgeon considered his presence at Mangaia would be useful. I therefore asked Captain Baynes to take him. I also brought Lieut.-Colonel Gudgeon, and Mr. Goodwin, the interpreter to the Cook Islands Government. H.M.S. "Mildura" sailed at 6 p.m., reaching Mangaia the following morning, Tuesday, the 9th October, at daybreak.

Mangaia is a fair-sized island, with a considerable production for export of copra, bananas, pineapples, oranges, and other fruits. There is apparently no anchorage, and no landing for ships' boats, disembarkation being effected first in the ship's boats, which conveyed us close to the reef, thence by transhipment into canoes, the largest holding about eight people. These carried us safely through the surf. I was, on landing, conducted to the residence of "King" John, the principal Ariki, and there addressed the assembled chiefs and people, informing them of the annexation of Rarotonga and other islands, and desiring to learn their wishes. I then left the chiefs to discuss matters, Colonel Gudgeon remaining with a view of answering any questions they might desire to put. The ownership of the land was the only question they were in doubt about, and on being informed that this was acknowledged they unanimously decided in favour of annexation, signing the deed of cession.

In Mangaia the tenure of land is different from that in Rarotonga and other islands, each family being the acknowledged owner of the land it holds, and it is beyond the power of the Ariki to dispossess the owner except for crime. In Rarotonga the Ariki asserts the right to the land, and the inferior families therefore only hold it at his pleasure, and, no matter what improvements or planting they may do, they are liable to be turned away without cause or reason. This is very detrimental to the development of property in this island, as the Natives do not care to improve the land, fearing the Ariki alone would reap the reward. In consequence they are content if their labour provides them with a bare subsistence.

On receiving the deed of cession I proceeded to the chief Ariki's house, and read the Proclamation accepting the cession and the Proclamation of annexation. The procedure was similar to that at Rarotonga, concluding with the singing of the National Anthem.

We then returned on board, and proceeded to Aitutaki, which we reached the following day at noon. Owing to s.s. "Ovalau" being here loading fruit, I had not so large a gathering of the people as I should have liked, but the chiefs were almost all present. Regarding this island there seems to have been some confusion. New Zealand has always understood that it was annexed

about the year 1890. The people of Aitutaki have laboured under the same belief. I thought it, however, desirable, as I had no official record, to inquire into the question. No copy of the original Proclamation was obtainable from the chiefs The Rev. Mr. Lawrence showed me a copy of the Proclamation of a protectorate, which was printed among the New Zealand parliamentary papers. He further informed me that the people understood it as a Proclamation of annexation. Under these circumstances, I considered it was unnecessary to obtain the cession from the chiefs, especially as they had by their conduct conclusively proved that they considered themselves part of the British Empire, they having in the past objected to being governed by the Cook Islands Parliament on the strength of their being British. They had also prided themselves on this account as being superior to the other islands of this group. I addressed the people, and informed them of the annexation of the rest of the group. The flag was then formally hoisted by Lieutenant Rideout, R.N., who was acting as my aide-de-camp in place of Captain Alexander, who was confined to his room from an accident. I then declared the island annexed. The people seemed generally gratified and pleased with the ceremony; there were no dissentients.

From Aitutaki we proceeded to Penrhyn (a British possession). This island is intimately connected with Rarotonga, the London Mission sending missionaries there, and the doctor to the Cook Islands Government visiting it in the missionary steamer. My Ministers were desirous of obtaining the best information, and I therefore asked Dr. May, R.N., to furnish me with a special report on the leprosy, and Lieut.-Colonel Gudgeon on trade and affairs generally. I regret to report that both show an unsatisfactory state of affairs, and it is evident that no improvement can take place through Native sources. That a Resident, in any case for a year or two, is needed to initiate reforms and see justice carried out is also evident. The natives are being demoralised by the wholesale importation of liquor, chiefly "absinthe," which, I understand, is brought in by French traders, or vessels flying the French flag. The expense incurred should easily be met after the first year by the revenue obtainable.

The same British Resident could undertake the charge of Manihiki, or Humphrey Island, and Rakaanga, also of Suwarrow: there is fairly good communication between these islands by trading schooners, and there is the same need of supervision.

These islands are all presumed to be only British protectorates (except Penrhyn). The Colonial Office List, 1899, page 322, states that Humphrey (Manihiki) and Reirson (Rakaanga) were annexed in 1889, but the traders understood it was only a protectorate. I venture to suggest that these islands should be included in any extension of the boundaries or jurisdiction of New Zealand.

The Danger Group is also worthy of consideration. I have, however, no information regarding these islands. In the past they have all been little visited, and British authority has been more a name than a reality. Their industries, instead of having been fostered with care, have been deteriorated by traders accepting immature pearl-shell; and if the present course were allowed to continue all exports would soon cease, and the natives, now accustomed to spirits and strong liquor, would lose all sense of civilisation.

From Penrhyn I proceeded to Niue, or Savage Island, touching on the way at Manihiki.

On the 19th October H.M.S. "Mildura" arrived at Niue. After an interview with the Rev. Mr. Lawes, the missionary, I wrote to the "King" asking him to meet me on the following morning, 20th October, at 9 a.m, and expressing my desire to address the chiefs at a later hour. The interview was entirely satisfactory, and we adjourned from the mission station to the schoolhouse, where the chiefs were assembled. The "King" then addressed them regarding their views on annexation, stating that he was entirely in its favour, but that he had not signified his assent pending their decision. When the "King" had concluded I addressed them, Mr. Lawes acting as interpreter, the language in this island being different from that of the Cook Islands and Penrhyn, &c. The chiefs, after a short consultation with the members present from their respective villages, one after the other spoke in favour of annexation, each on concluding signing the deed of cession. All were unanimous. They, however, distinctly pointed out their desire that in no case should any control be exercised over them from Tonga, and requesting a British Resident. The flag was then hoisted with the usual ceremony, and the Proclamation read.

From Niue we proceeded to Tonga for coal for the return journey.

In conclusion, I have the honour to inform you that all documents, proclamations, conversations, &c., were translated into the native tongues, and that the chiefs and natives in every instance thoroughly understood the question, and, understanding, were unanimous in their decision.

I have, &c.,

The Right Hon. J. Chamberlain,
Secretary of State for the Colonies.

RANFURLY.

QUESTION 2.—CORRESPONDNCE.

Write a memorandum and an official covering letter from the following rough notes:—

Mem. for Gvr.

Pmr psnts compts & desires bring under H.E. notice necessity for complete resurvey of coasts col.

Some parts properly srveyd & little requires done bt othr prts never cmpltely srveyd. Charts fm time to tme dfectve & misleading.

Pmr threfre rspctfly rqts H.E. bring matter under notice Impl authorities & ask send vessel to prprly cmplete srvey. Our Marine Dept and officers wd indicate to cmmndr srvey vessel parts coast wh require mst urgnt attention.

Pmr's Office Wgtn N.Z.
15/1/00

R.J.S.
Pmr.

Letter.

Gvt H Wgtn, N.Z.
16/1/00

Enclose copy mem fm Pmr re resurvey N.Z. coasts.

Original srvey N.Z. coasts seems to hve bn carried out by HMS Acheron and Pandora btwn '49 & '55. Survey then only partial, many inaccuracies in charts. Fresh rocks & othr dangers constantly discvrd. Many hrbr charts thro' alteration bars comparatively little use.

Large increase in drght & size of stmrs makes srvy mst urgent.

Rt Hn Sec St Cols.

R.
Gvr.

QUESTION 3.—INDEX

Make a general index of all documents set out in Question 1 and in your answer to Question 2.

N.B.—Your index should be in such form that a person desiring to refer to the subjects of correspondence, dates, writers, receivers, and purport of communications can, at a moment's notice, place his finger on that which he requires.

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

[All the sections should be attempted, but not more than one question may be taken in any one section.]

SECTION I.

1. Give a brief but clear description of the nervous system.
2. Explain by what physiological conditions the mental energy of a child may be depressed below its normal standard.
3. What position should the vocal organs assume in pronouncing (1) the vowel *a* (as in *grate*); (2) the diphthong *ou* (as in *pound*); (3) the consonantal *ng* (as in *thing*).

SECTION II.

1. What is meant by the training of the senses? Illustrate your answer by explaining in what ways you would seek to train the ear of a child between five and ten years of age, and what means you would adopt to gain your purpose.
2. Discuss (*a*) the different forms of obstinacy as seen in children from five to twelve years of age; (*b*) the educative influence of the school on the moral side of consciousness.
3. "The end of education is self-reliance." Comment upon and illustrate this statement.

SECTION III.

1. Discuss the respective functions of the influence of older pupils and of the influence and authority of the teacher in creating a healthy school spirit.
2. Compare (*a*) the educative value of an expression of approval or disapproval with so-called "rewards and punishments"; (*b*) direct and formal moral teaching with indirect moral teaching.
3. How ought the teacher to deal with the individual child's impulses, tastes, and capabilities? Distinguish briefly between the methods to be adopted respectively (*a*) with younger and older children, (*b*) in small and large classes.

SECTION IV.

Write full notes of a lesson on one of the following subjects:—

(*a.*) A forest tree. (Infants.)
(*b.*) Rain.
(*c.*) An easy sum in compound practice.
(*d.*) Subject and predicate. (A first lesson, in which the use of these words should be avoided.)
(*e.*) The rivers of South America.
(*f.*) A locomotive *or* a traction engine.

SECTION V.

1. What are the chief qualifications that a good teacher should possess? State the grounds of your answer.
2. Explain what you consider to be the best method of teaching science.
3. Discuss the utility of manual training as a part of general education.

SECTION VI.

Write an essay on one of the following subjects :—

(*a.*) Infant training: its necessity and importance.

(*b.*) The aims and methods of nature study: what to teach and how to teach it.

(*c.*) The advantages of physical training, and the best forms of physical exercise.

[The essay should cover not more than two pages of foolscap.]

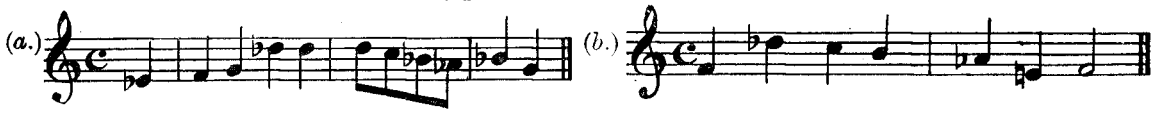
Vocal Music.—For Classes D and E. Time allowed: Three hours.

1. On the treble staff write the scale of G minor (melodic form) ascending and descending. Under each note place the staff and sol-fa names.

2. In both notations give examples of a major seventh, a minor sixth, an augmented fourth, a diminished fifth. All to be taken from the scale of E major.

3. Write four short exercises to illustrate the effect of the seventh note of the major scale.

4. In what keys are the following passages?—



Rewrite both in the tonic sol-fa notation.

5. Explain the following time-signatures, give examples of each in both notations, and show by diagrams how to beat the time of each :—

$\frac{2}{4}$ (two-pulse), $\frac{6}{8}$ (six-pulse) slow, $\frac{9}{8}$ (nine-pulse) quick.

6. Explain the difference between $\frac{3}{4}$ and $\frac{6}{8}$ time. Group the following notes in illustration :—

7. Write from memory any tune.

8. Give the meaning of the following: *Dim., pf, calando, accelerando, andantino.*

9. Explain, as to a class, what you consider the best method of breathing for singing purposes. Your answer should refer immediately to classes of boys and girls; but brief reference may be made to the different methods of breathing suitable for adult men and women.

10. Write a lesson on this song, explaining the notation, signs of all kinds, &c. :—

p KEY **D.** *Andante.* M. 50, twice; or 150, six times.

| **m** :— :**m** | **s** :— :**s** | **d**^{1} :— :— | — : : | **l** :— :**f** | **f** :**s** :**l** | **s** :— :— | — :— : |

Rest, my ba - by, rest! In thy dow - ny nest;

| **s** :— :**r** | **r** :**m** :**f** | **m** :— :**d** | **s** :— :— | **s** :— :**r** | **r** :**m** :**f** | **m** :— :**s** | **d**^{1} :— :— |

Hark! the rain is fal - ling fast, Wind and storm are dri - ving past!

mf

| **l** :— :**l** | **l** :— :**l** | **se** :—**l** : | **t** :— :**m** | **d**^{1} :— :**d**^{1} | **d**^{1} :— :**d**^{1} | **t** :— :**d**^{1} | **r**^{1} :— :**s** |

Hark! the dog, with an - gry grow - ling, Chides the beg - gar, home - less prow - ling;

f *pp*

| **m**^{1} :— :**r**^{1} | **d**^{1} :— :**t** | **r**^{1} :— :**d**^{1} | **l** :— :— | **s** :— :**s** | **s** :**f** :**r** | **d** :— :— | — : : |

Here, with peace and com - fort blest, Rest, my ba - by, rest!

Practical Tests (Part of a Paper on Vocal Music).—For Classes D and E.

MAXIMUM MARKS.—Ear test, 5; time test, 15; singing at sight, 20.

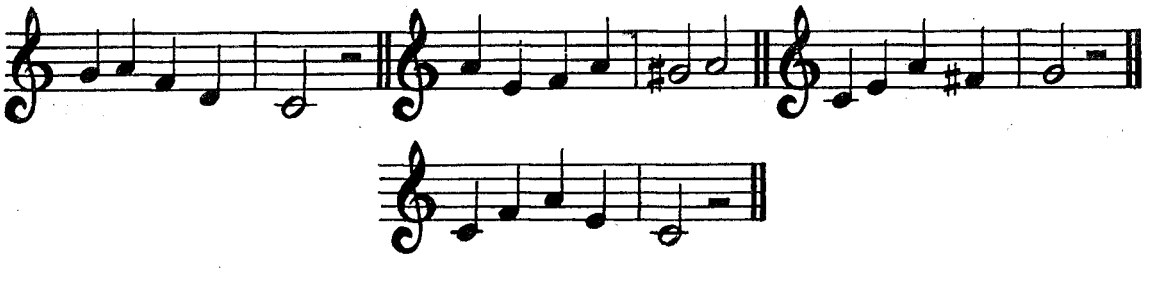
EAR TESTS. (Any two of the following phrases to be imitated by the candidate from the Examiner's pattern, as an ear test.)

KEY **C.**

| **s** :**l** | **f** :**r** | **d** :— | : | | **l** :**m** | **f** :**l** | **se** :— | **l** :— |

| **d** :**m** | **l** :**fe** | **s** :— | : | | **d** :**f** | **l** :**m** | **d** :— | : |

The same tests in staff notation.

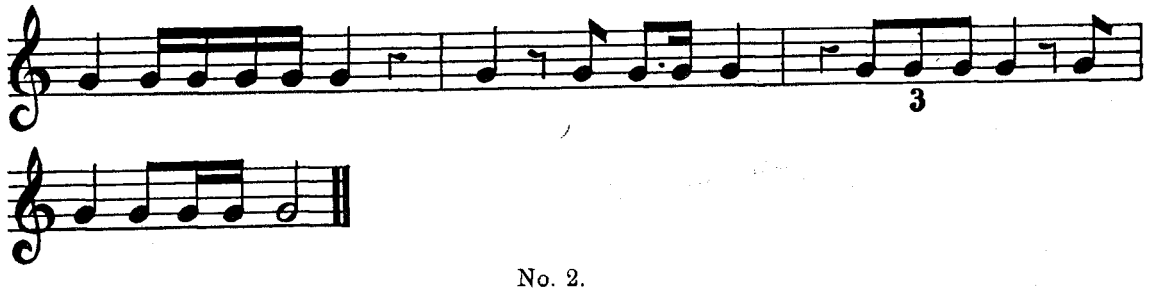


TIME TESTS. (The Examiner to use either or both at his discretion.)

No. 1.

| 1 :1,1.1,1 | 1 | 1 : .1 | 1 .–,1:1 | :1,1,1 | 1 : .1 | 1 :1 .1,1 | 1 :—

The same in staff notation.

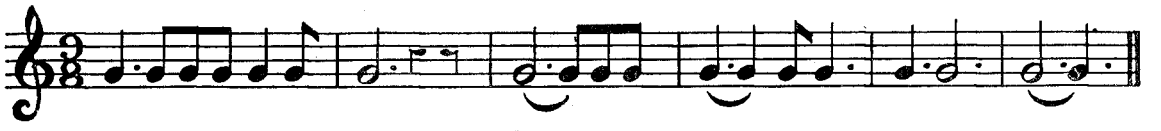


No. 2.

| 1 :—:— | 1 :1 :1 | 1 :—:1 | 1 :—:— |—:—:— | : : | 1 :—:— |—:—:— |—:1 :1 |

| 1 :—:— |—:—:1 | 1 :—:— | 1 :—:— | 1 :—:— |—:—:— | 1 :—:— |—:—:— |—:—:— |

The same in staff notation.



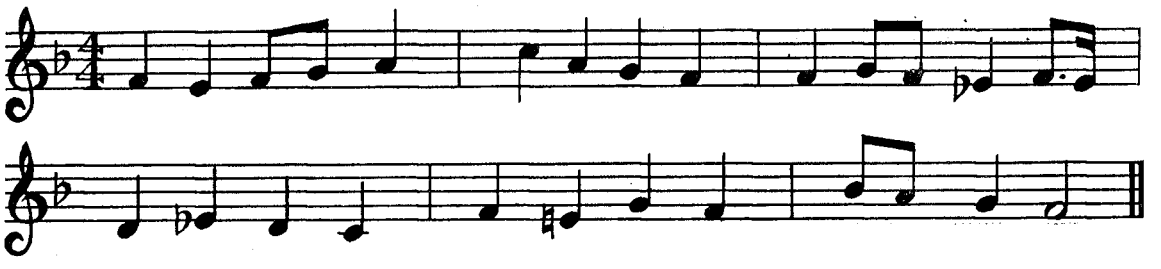
SINGING AT SIGHT. (The Examiner will explain to the candidate that the easier tests, which are marked "A," carry only half the marks carried by the harder tests, which are marked "B.")

KEY F. No. 1 (A).

| d :t_1 | d .r:m | s :m | r :d | d :r .d | ta_1 :d .–,ta_1 | l_1 :ta_1 | l_1 :s_1 |

| d :t_1 | r :d | f .m:r | d :— |

The same in staff notation.

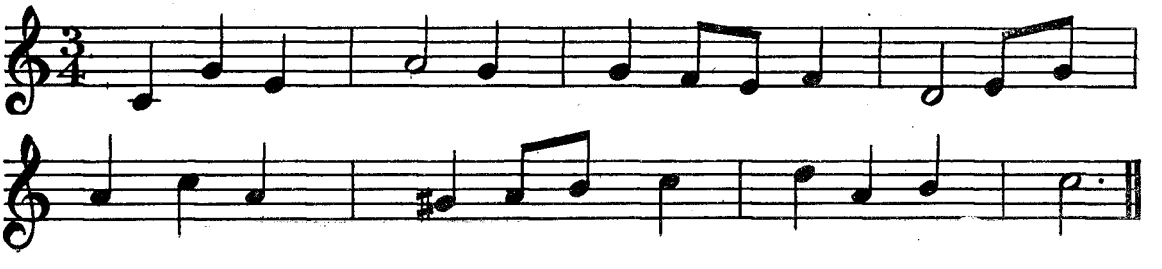


KEY C. No. 2 (A).

| d :s :m | l :— :s | s :f .m:f | r :— :m.s | l :d^1 :l |

| se :l .t :d^1 | r^1 :l :t | d^1 :— :— |

The same in staff notation.

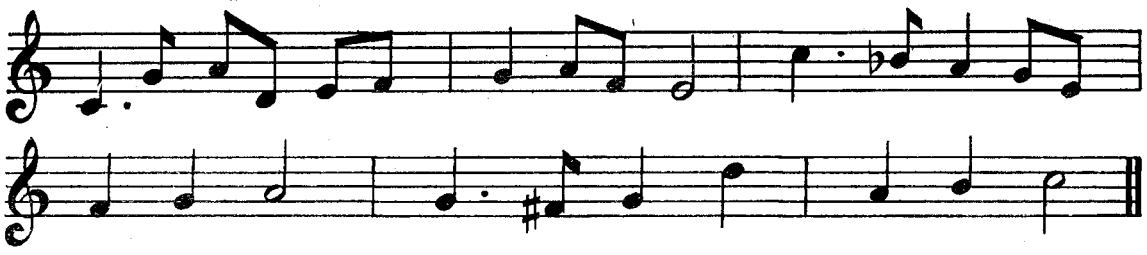


KEY C. No. 3 (B).

| d :- .s | l .r :m .f | s :l .f | m :— | d^1 :- .ta | l :s .m | f :s | l :— |

| s :- .fe | s :r^1 | l :t | d :— ||

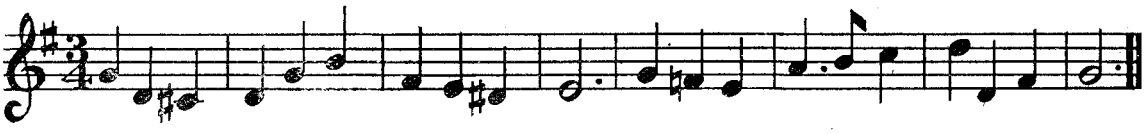
The same in staff notation.



KEY G. No. 4 (B).

| d :s_1 :fe_1 | s_1 :d :m | t_1 :l_1 :se_1 | l_1 :— :— | d :ta_1 :l | r :- .m :f | s :s_1 :t_1 | d :— :— ||

The same in staff notation.



Blackboard Drawing.—For Classes D and E, and for Civil Service Junior.

INSTRUCTIONS TO THE CANDIDATE.

You are required to attempt all three of the tests.
Write your examination number large at the top right-hand corner of each of your drawings.
Each drawing should be as large as the black paper [*36 inches by 27 inches*] will comfortably allow.
Do not fold your drawings when they are finished, but hand them to the Supervisor open.

TEST 1.

Time allowed, eight minutes.

Make a drawing, from memory, of any one of the objects mentioned in the following list, and write the name of it underneath before you begin :—

(*a.*) A jug.
(*b.*) A bedroom candlestick.
(*c.*) A water-can.
(*d.*) A box, with the lid open.
(*e.*) A flower. (Say what flower.)
(*f.*) Any plant, animal, or part of any animal. (Say what plant or animal, or what part of what animal.)

TEST 2.

Time allowed, ten minutes.

Make an enlargement of the accompanying diagram (No. 81A).

TEST 3.

Time allowed, eight minutes.

Sketch the group of objects set before you by the Supervisor, including the board on which they are placed.

No. 81A.]

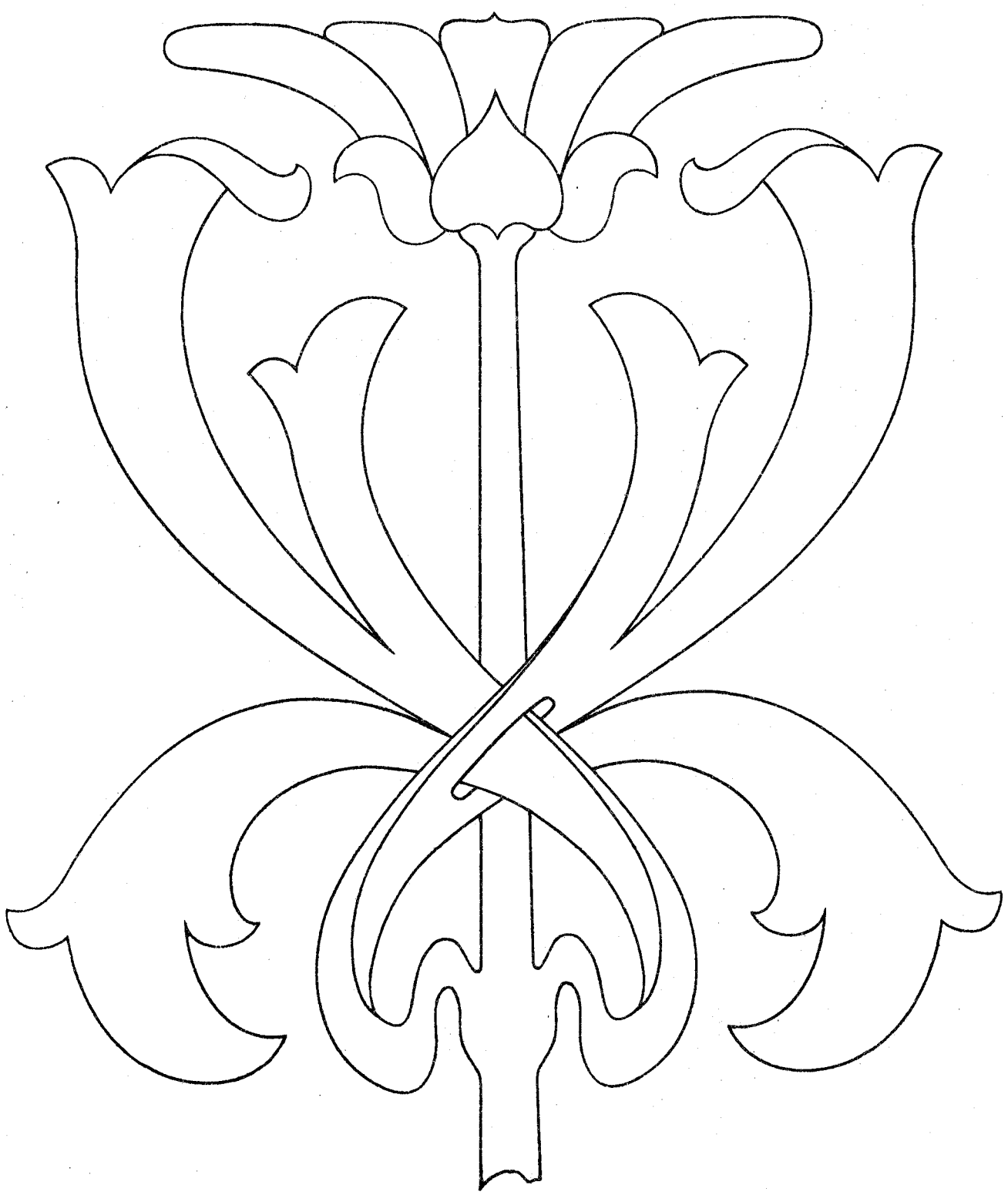
For Classes D and E, and for Junior C.S.

NEW ZEALAND.—EDUCATION DEPARTMENT.

Certificate and Civil Service Examinations, 1904.

BLACKBOARD DRAWING.

DIAGRAM TO TEST 2.



No. 81B.]

For Classes D and E, and for Junior C.S.

(For Supervisors only.)

NEW ZEALAND.—EDUCATION DEPARTMENT.

CIVIL SERVICE EXAMINATIONS.

1904.

INSTRUCTIONS ABOUT BLACKBOARD DRAWING.

Time allowed for Test 1, eight minutes; for Test 2, ten minutes; for Test 3, eight minutes.

TEST 1.

The paper in blackboard drawing is not to be given to the candidate until he is in place at the blackboard ready to take the first test—drawing from memory—the time allowed for which is eight minutes. You are requested to take care that none of the objects mentioned in the following list, nor any representations of such objects, are in view of the candidates during the progress of this test:—

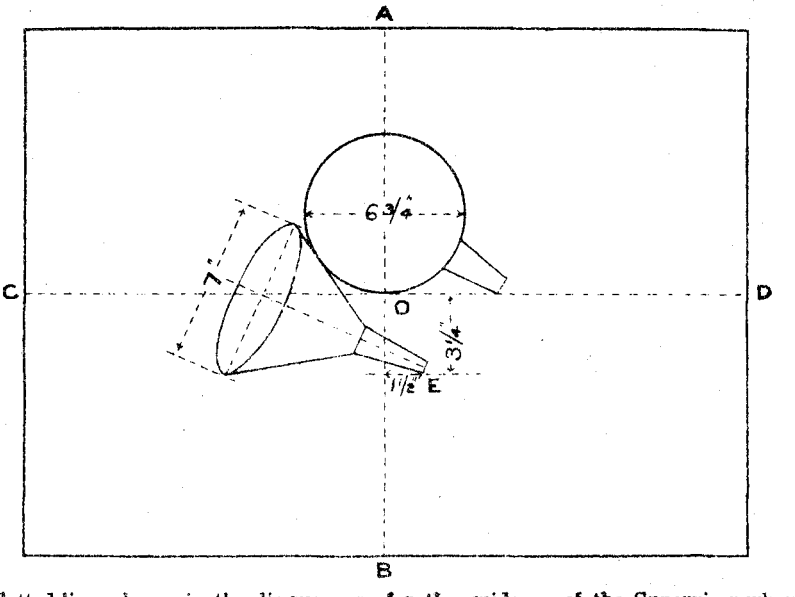
A jug.
A bedroom candlestick.
A water-can.
A box, with the lid open.
A flower.
Any plant, animal, or part of any animal.

TEST 2.

The time allowed for Test 2 is ten minutes.

TEST 3.

For the purpose of Test 3, the time allowed for which is eight minutes, a board (preferably a drawing-board), the dimensions of which must be not less than those of an imperial drawing-board (30 inches by 22 inches), is to be arranged so that its upper surface is about 30 inches above the floor. The board may be placed on an ordinary table.



[N.B.—The dotted lines shown in the diagram are for the guidance of the Supervisor when setting up the model, and must, if reproduced on the board, be removed before the examination begins. If there are more than ten candidates two or more groups of models should be set up.]

A, B, C, D are the middle points of the four edges of the board. A tin dipper, X, 6¾ inches in diameter, is to be placed on the board so that its centre lies in the line O A, while its rim and its handle are just clear of the line O D. A funnel, Y, 7 inches in diameter, is to be so placed that its body crosses the line O C and its nozzle crosses the line O B, while the tip of the nozzle rests on the board at E, which is 1½ inches from the line O B and 3¼ inches from the line O D. The body of the funnel is to be touching the dipper.

The board with the objects on it should be kept covered with a cloth or with a large sheet of paper till the candidates are in place at the blackboard ready to take the third test.

You are requested to see that the candidate's examination number is legibly written at the top right-hand corner of each of his drawings, as also, in Test 1, the name of the object drawn.

No. 82.]

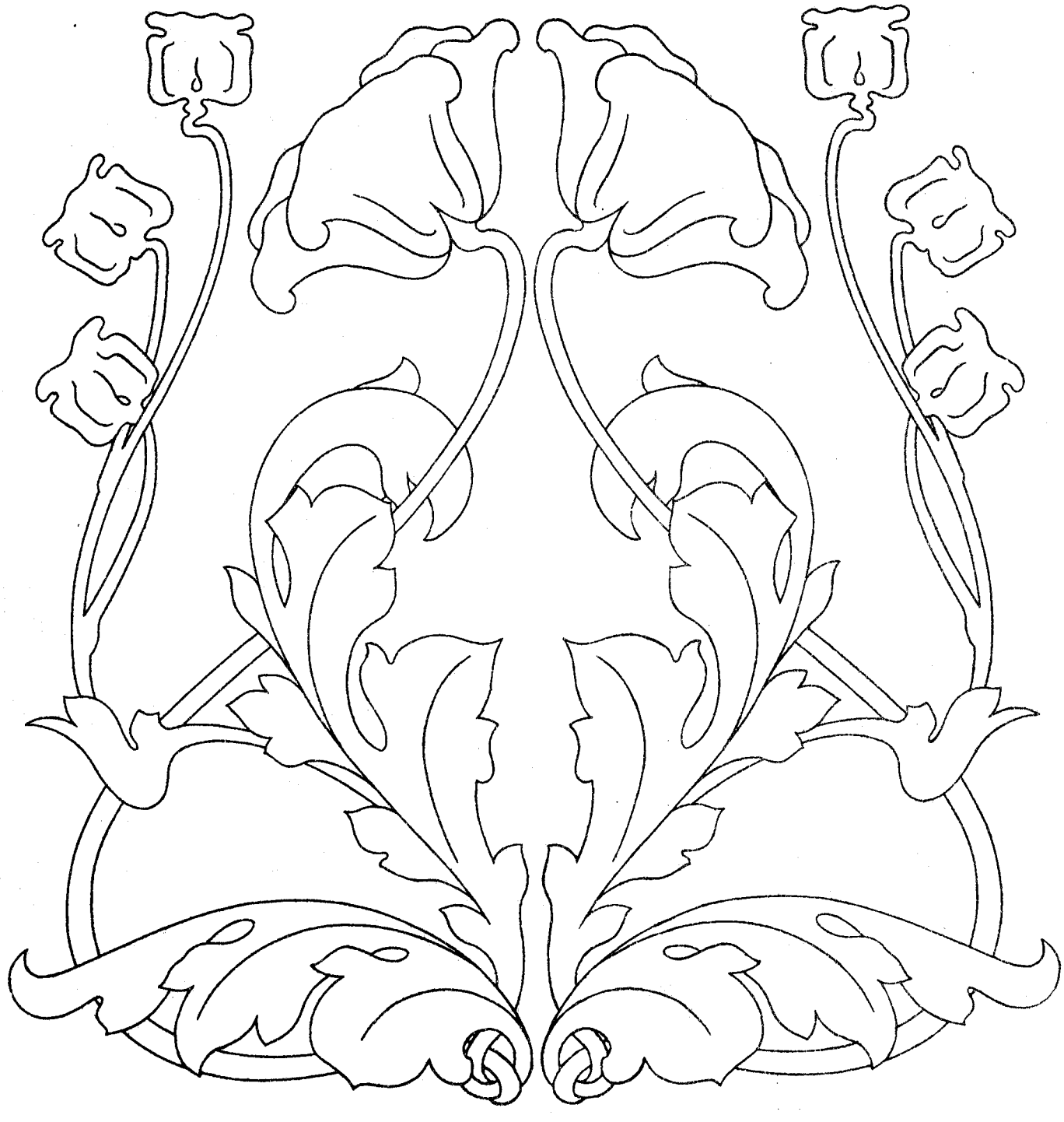
For Classes D and E, and for Junior C.S.

NEW ZEALAND.—EDUCATION DEPARTMENT.

Certificate and Civil Service Examinations, 1904.

FREEHAND DRAWING.

Time allowed: One hour and a half.



Candidates are required to make a drawing of this figure so as nearly to fill the rectangle drawn on the accompanying sheet of drawing paper. The leading lines of the whole should be sketched in first, and the drawing should then be completed, as far as the time allows, in clear outline. A part at least should be completed.

No. 83A.]

For Classes D and E, and for Junior C.S.

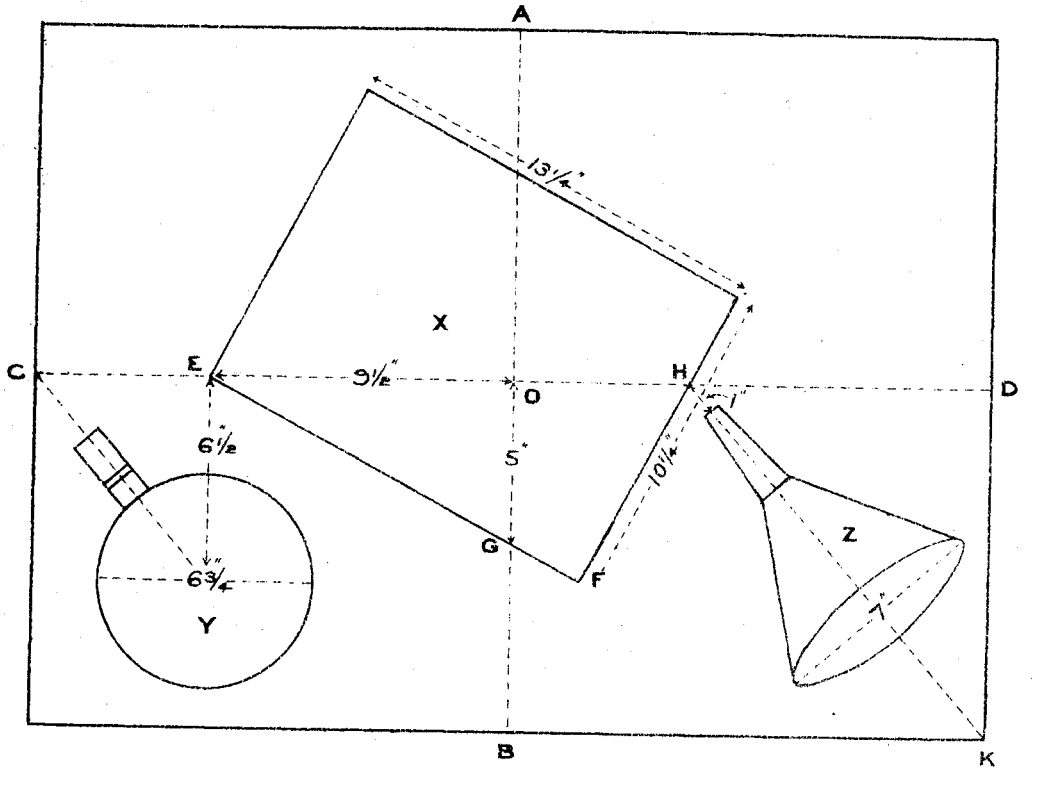
(For Supervisors only.)

NEW ZEALAND.—EDUCATION DEPARTMENT.

CERTIFICATE AND CIVIL SERVICE EXAMINATIONS 1904.

INSTRUCTIONS ABOUT MODEL DRAWING.

A board (preferably a drawing-board), the dimensions of which must not be less than those of an imperial drawing-board (30 inches by 22 inches), is to be arranged so that its upper surface is about 18 inches above the floor. The objects named below are to be placed thereon in accordance with the following diagram and directions.



[N.B.—The dotted lines shown in the diagram are for the guidance of the Supervisor when setting up the model, and must, if reproduced on the board, be removed before the examination begins. If there are more than ten candidates two or more groups of models should be set up.]

A, B, C, and D are the middle points of the four edges of the board, and O is the centre of the board.

A biscuit-tin, X, 13¼ inches long, 10¼ inches wide, and 9½ inches high, is to be placed on the board so that the corner E is in the line O C, 9½ inches from O, and so that one of the longest edges of the tin crosses the line O B at G, 5 inches from O.

A dipper, Y, 6¾ inches in diameter, is to be placed so that its centre is 6½ inches from O C and 9½ inches from O B, while its handle is pointed towards C.

A funnel, Z, 7 inches in diameter, is to be placed so that its length lies along the line H K, while the tip of its nozzle is 1 inch from H, where the end of the tin crosses the line O D.

The candidates are to be allowed one hour and a half for this exercise.

No. 84.]

For Classes D and E, and for Junior C.S.

NEW ZEALAND.—EDUCATION DEPARTMENT.

CERTIFICATE AND CIVIL SERVICE EXAMINATIONS.

1904.

GEOMETRICAL DRAWING.

Time allowed: One hour and a half.

Not more than 5 questions are to be attempted, one of which must be question 6 or question 7.

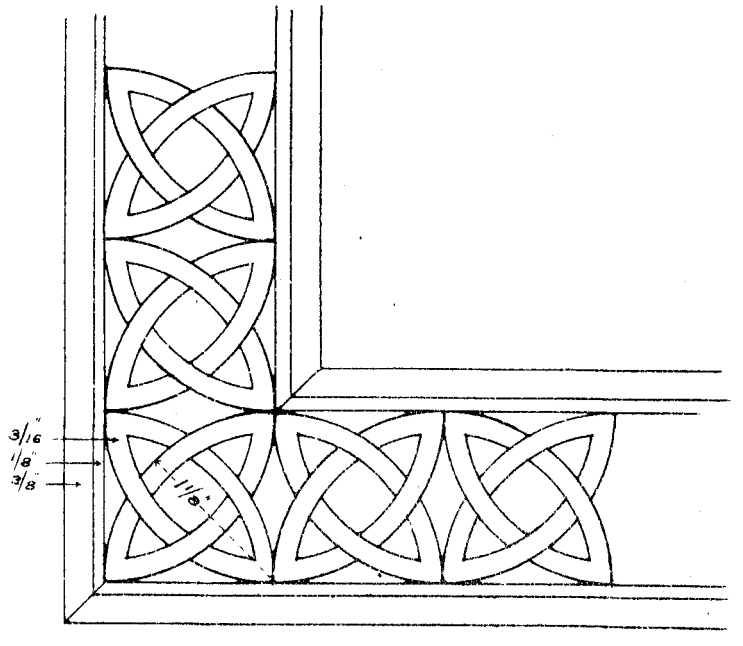
CAUTION.—No credit whatever will be given for solutions which appear to be the result of experiment—*i.e.*, those in which the lines used to obtain the required result are not clearly shown.

The diagram referring to question 7 is to be accurately transferred to the drawing paper. It may be pricked through.

1. A line $1\frac{4}{5}$ inches long in a certain drawing represents 1 furlong 2 chains. Draw the scale to which the drawing was made. Show by small marks on the scale the points you would take in order to take off a distance of 3 furlongs $8\frac{1}{2}$ chains. What is the representative fraction of the scale?

N.B.—The scale must be properly finished and figured.

2. Draw the given border, using the figured dimensions.



[TURN OVER.

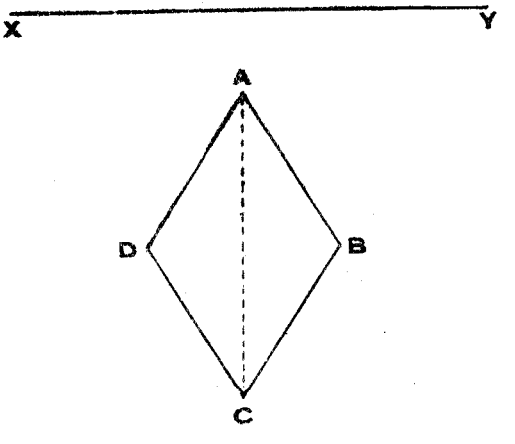
3. The shadow cast on the ground by a vertical rod 5 feet high is 6½ feet in length. Find the height of a chimney whose shadow is 35 feet long. (Scale, $\frac{1}{10}$ inch to 1 foot.)

4. On a line 3·75 inches long as hypotenuse describe a right-angled triangle having one of its acute angles of 20°. Find a point within the triangle equidistant from all of its sides. On the shortest side of the triangle describe a heptagon. On the hypotenuse describe a parallelogram having an altitude of $\frac{7}{8}$ inch and one of its angles equal to the larger of the acute angles of the triangle. Describe a circle of $\frac{1}{2}$ inch radius to touch the remaining side of the triangle at its middle point.

5. Find the length of an edge of a square piece of cardboard whose area is equal to the area of what remains of a piece of cardboard 5 inches square after a piece 3 inches square has been removed from it.

6. A block of wood 2 inches square and 1 inch thick rests on the horizontal plane; it supports another square block $\frac{3}{16}$ inch high, the corners of whose base coincide with the middle points of the edges of the larger block. A square pyramid 2 inches high is placed on the smaller block so that the corners of its base coincide with the middle points of the upper edges of that block. Draw a plan of the group and an elevation of it on a vertical plane making an angle of 25° with a long edge of the larger block.

7. The plan A B C D is given of a square one of whose corners, B, rests on the horizontal plane, the diagonal A C being parallel to the horizontal plane. Find the true length of a side of the square and the angle at which the surface of the square is inclined to the horizontal plane.



No. 85.]

For Classes D and E, and for Junior C.S.

NEW ZEALAND.—EDUCATION DEPARTMENT.

CERTIFICATE AND CIVIL SERVICE EXAMINATIONS.

1904.

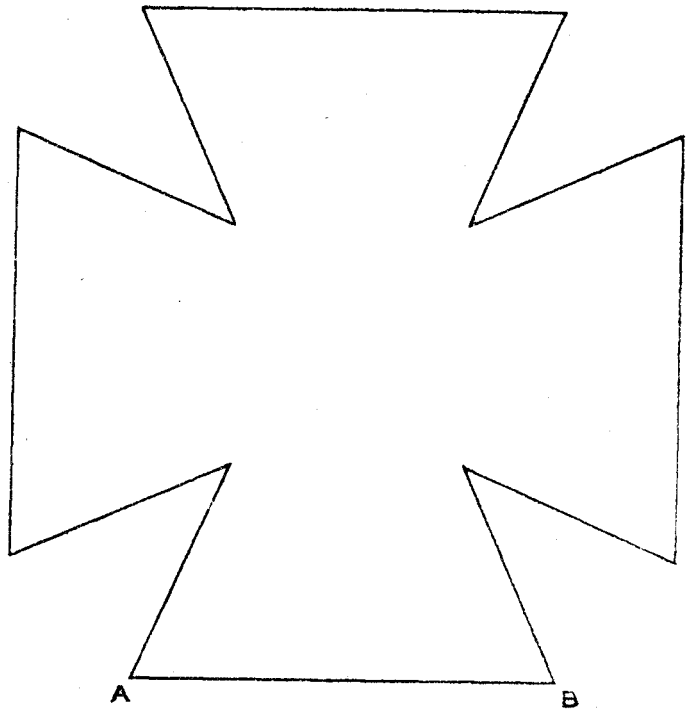
PERSPECTIVE.

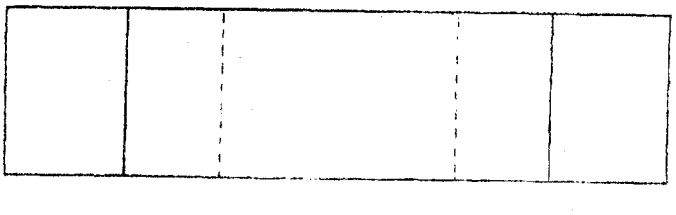
Time allowed: One hour and a half.

Draw the perspective representation of the Maltese cross, the plan and elevation of which, drawn to a scale of ½ inch to 1 foot, are given below.

The cross stands on the ground plane with the corner A 4 feet to the right of the spectator, and 4 feet behind the picture plane; the edge A B recedes to the right at an angle of 30° to the picture plane. The eye of the spectator is to be 12 feet by scale in front of the picture plane, and 5 feet above the ground plane. Scale, ½ inch to 1 foot.

[N.B.—All the necessary construction lines must be shown.]





No. 86]

For Classes D and E, and for Junior C.S.

NEW ZEALAND.—EDUCATION DEPARTMENT.

CERTIFICATE AND CIVIL SERVICE EXAMINATIONS. 1904.

BRUSH DRAWING.

Time allowed: One hour and a half.

[The selection of colours is left to the taste of the candidate. Not more than four questions are to be attempted. Candidates for teachers' certificates must attempt either question 5 or question 6.]

1. Make a design suitable for the ornamentation of a six-inch tile, using any or all of the elements (*a*) to (*g*). Only one-quarter of the design is to be completed.

2. Make a brush drawing of any flower (name the flower), insect (name the insect), or bird (name the bird) with which you are familiar.

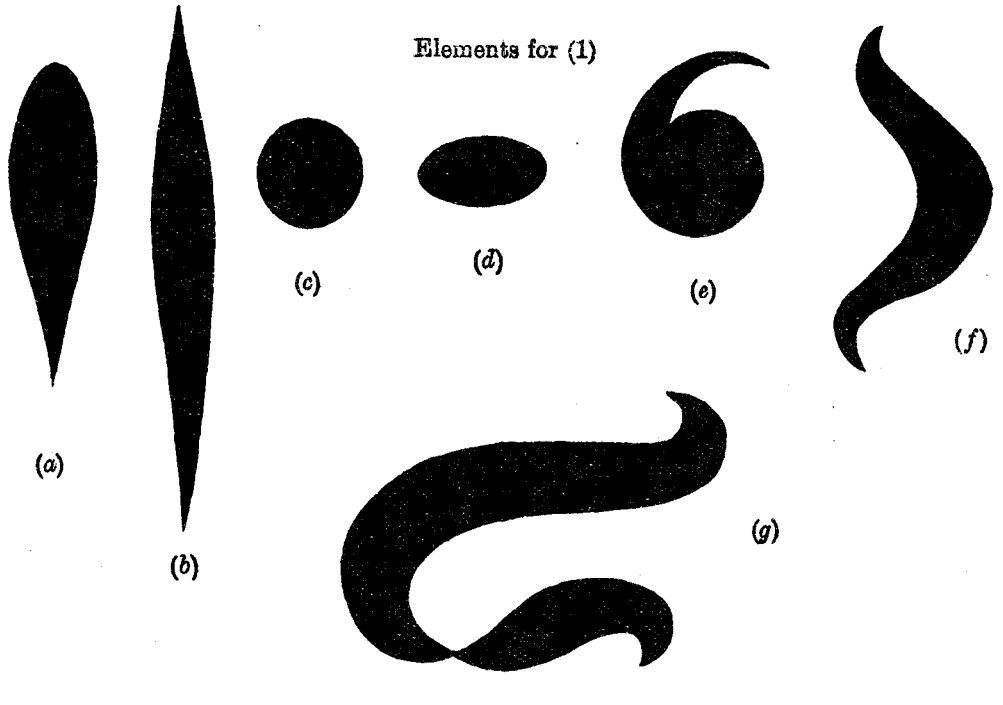
3. Make an enlarged brush drawing of Figure A. *(See back of this leaf.)*

4. Make a design in brush strokes to fill an equilateral triangle of five-inch sides.

5. Indicate by notes and rough sketches with the brush a course of lessons in brush drawing suitable for Standard III., assuming that the pupils have had a preparatory course of brush drawing in Standard II.

6. What is the educational value of brush drawing? What advantages has it, if any, over freehand drawing with chalk or pencil? Illustrate your answer by rough sketches.

Elements for (1)



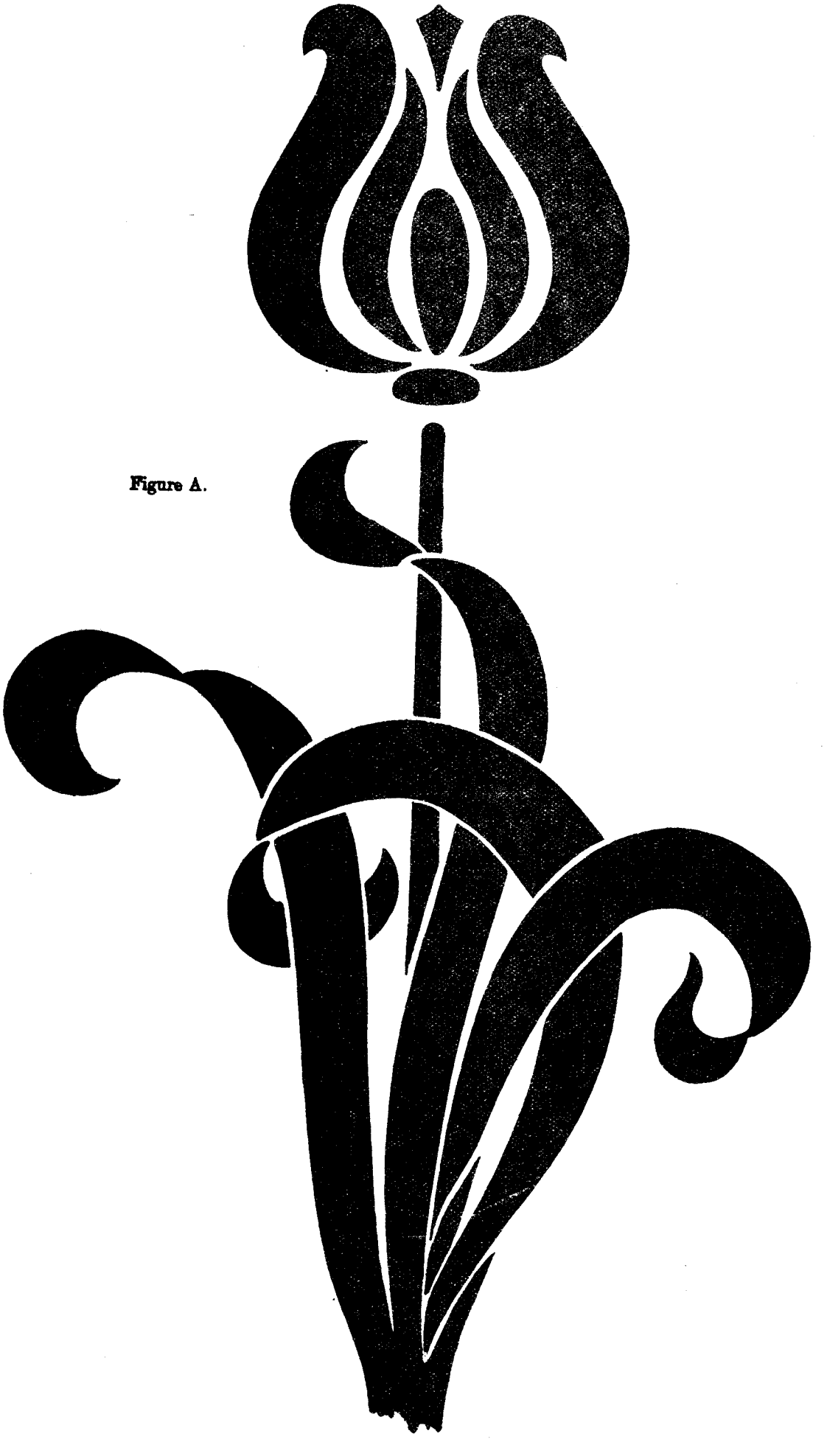


Figure A.

Needlework.—For Classes D and E. Time allowed: Three hours.

[Before handing in your sewing work to the Supervisor, write your examination number and your class clearly on each of the three labels and on the envelope provided; fasten one label securely with needle and thread to the toe of the sock, one to the back of the nightgown yoke, and the third to what is left of the long-cloth provided; and enclose the whole in the envelope. Hand in the envelope to the Supervisor with your book of answers.]

[N.B.—Every candidate is expected to attempt Questions 1, 2, and 3.]

1. Cut out in long-cloth a double yoke for a nightgown for a little boy three years of age, to button in front. [The height of such a boy may be taken as about 2 feet 10 inches, his chest measure as 20 inches, and his neck measure as 10 inches.]
2. Cut out the front half of a skirt for the same nightgown; gather and stroke it and set it into the yoke specified in question 1, finishing the placket with a hem ½ inch wide on the button side and with a false hem 1 inch wide on the button-hole side.
3. Cut and work a button-hole in the yoke to fit the button provided, and sew on the button.
4. Darn the punched hole in the sock provided.
5. Draw in your book a sketch of a pattern for a woman's nightgown sleeve with a cuff, showing the measurements.
6. What advantages and disadvantages have the following?—
   (*a.*) Calico underclothing:
   (*b.*) Combination garments:
   (*c.*) Flannelette:
   (*d.*) Hand-sewing.

English.—For Junior National Scholarships. Time allowed: Two hours and a half.

[You must attempt questions 1, 2, and 9.]

1. Write from the following notes a letter of about thirty lines to a schoolfellow you have not seen for some time: Hope to start next month on a voyage Home *viâ* San Francisco; leave Auckland; call at Honolulu; break journey in the United States; see Chicago, New York, &c.; large Atlantic steamer; Newfoundland fogs; perhaps Marconi telegrams; mouth of Mersey, Liverpool; rail to London; things to see in London.
2. Write two or three paragraphs on *one* (and only one) of the following subjects:—
   (*a.*) The Pacific cable.
   (*b.*) Any native New Zealand bird.
   (*c.*) Any play of Shakspere.
3. Point out any faults you may see in the following passages, and rewrite the sentences so as to avoid the faults:—
   (*a.*) Anyhow, if fifty farmers will join together and import a thousand Australian magpies I will gladly be one of them.
   (*b.*) He only walked there once more.
   (*c.*) The Governor with the ministers and other distinguished visitors present were then entertained with luncheon in the committee's tent.
4. Combine the following statements into two or three complete sentences:—

There was once a fine young working-bee. She left her hive. It was a lovely morning. It was summer. She wanted to gather honey from the flowers. The sun shone brightly. The air felt warm. So she flew a long, long distance. She then came to some gardens. The gardens were very beautiful. The gardens were very gay. She roamed about there. She went in and out of the flowers. She buzzed in great delight. She loaded herself with treasures. She could carry no more. Then she bethought herself of returning home. She was just beginning her journey. She flew through a window. That was an accident. The window was open. It was the window of a country house. The bee found herself in a room. It was a large dining-room.

5. Explain briefly the meaning of the following words, making a sentence for each of them that will show clearly that you understand the meaning of the word in question: Mosque, monopoly, comprehend, satellite, calcareous.
6. Express the following passages in other words so as to make it clear that you understand the meaning of them:—

(*a.*) Fear no more the heat o' the sun,
Nor the furious winter's rages;
Thou thy worldly task hast done,
Home art gone, and ta'en thy wages;
Golden lads and girls all must,
As chimney-sweepers, come to dust.

(*b.*) Near yonder copse where once the garden smiled,
And still where many a garden-flower grows wild,
There, where a few torn shrubs the place disclose,
The village preacher's modest mansion rose.

7. Reconstruct the sentences from "Gulliver's Travels" of which a rough analysis is given below; the words in italics are to be replaced by other words as indicated:—
   (1.) (*a.*) I had a strong hope: Principal clause.
   (*b.*) I should one day recover my liberty: Noun clause, in apposition with the object of (*a*).
   (*c.*) *This hope* (replace by relative pronoun) never left me: Adjective clause to the object of (*a*).
   (2.) (*a.*) As to the ignominy of being carried about for a monster, I considered: Principal clause.
   (*b.*) Such a misfortune should never be charged upon me as a reproach: Noun clause, object of the predicate of (*a*).
   (*c.*) If ever I should return to England: Adverbial clause of condition to the predicate of (*b*).

8. Give the plural of: The phenomenon itself, this Frenchman, that Mussulman, sheaf, the index of this atlas, memorandum, formula, crisis; the feminine of fox, sultan, czar, earl, administrator, duke, songster.

9. Write from dictation the passage and the ten words read out to you by the Supervisor.

Arithmetic.—For Junior National Scholarships. Time allowed: Two hours.

1. A certain sum of money was divided by 4,994; the quotient was £3 0s. 0¾d., and the remainder was 2,298 farthings: what was the sum of money that was divided?

2. What fraction is 1 cwt. 19 lb. 4 oz. of one ton?

3. A man buys 103 acres 24 poles of land at £16 an acre; he lays off 4 acres 14 poles for roads, and divides the rest into sections each measuring 1¼ roods, which he sells at £6 a section: what does he make on his bargain?

4. One pound avoirdupois is equivalent to 7,000 grains troy; a cubic foot of water weighs 1,000 ounces avoirdupois. If gold is 19·2 times as heavy as water, what is the weight in grains troy of a cubic inch of gold?

5. It was high tide at Wellington at 11.58 p.m. on Sunday, the 29th November. If there are 12 hours 24½ minutes between one high tide and the next high tide, find at what times it was high tide on the 9th November.

6. Find the rate of interest if in five months £328 16s. amounts to £337 7s. 3d.

7. Find the number of gallons of water which a tank 19 ft. 5 in. long, 11 ft. 4 in. wide, and 5 ft. 10 in. deep can hold if 100 gallons contain 27,727 cubic inches.

8. In a school excursion the total railway fares of all the children amount to £19 10s. Each senior scholar pays one shilling more than a junior scholar. There were 40 senior scholars and 240 junior scholars. What does each junior scholar pay?

9. If by riding 7⅞ miles an hour I finish a journey in 24 days, how long shall I take to go twice the distance if I ride 6¾ miles an hour? [NOTE.—I ride the same number of hours each day.]

Geography.—For Junior National Scholarships. Time allowed: Two hours.

[Draw sketch-maps and diagrams wherever you can.]

1. State what is the action of rivers upon the land-surface, especially explaining the formation of deltas.

2. Give all the reasons you can why we should believe that the earth turns round once in about twenty-four hours. Mention, if you can, anything that you yourself have observed to prove this.

3. Describe the mountains, plains, and other surface features of Asia or of North America (only one of these), giving also a clear idea of the general slope or slopes of the land, and of the chief watersheds. You need not draw a map of the whole continent, but small sketch-maps may be employed to illustrate special points in your answer.

4. State what you know about land and sea breezes and their causes.

5. Compare New Zealand with some country that you think it resembles, and also with a country that you consider widely different from it. Show as clearly as you can what you believe the nature of the resemblance and of the difference to be.

6. State briefly and precisely where these places are, and why they are remarkable: Fremantle, Blenheim (Europe), "The Cape," Ben Nevis, Stromboli, Manchuria, Sutherland Falls, Lyons, Greymouth, Behring Sea.

7. Compare Great Britain and Ireland with France or the German Empire, especially with reference to trade and manufactures.

8. Trace through the various stages of its journey a letter sent from Wellington to Toronto.

General Paper.—For Junior National Scholarships. Time allowed: One hour and a half.

[Any six questions may be attempted, but not more than six.]

1. In what part of the sky is the new (crescent) moon seen? In what direction is the outer curved edge of the crescent moon turned? Explain your answers.

2. What products are formed in the burning of a candle? Describe briefly experiments that prove the truth of your answer.

3. Explain how a parrot's foot differs from that of a common fowl.

4. Explain briefly, but clearly, how an eclipse of the moon is caused. Why is there not an eclipse of the moon every month?

5. Describe the growth of an apple from the blossom to the ripe fruit, and state exactly all the parts you see if you cut an apple transversely (crosswise) through the middle.

6. Describe carefully one of the following: Thermometer, barometer, telescope, mariner's compass, rain-gauge.

7. How could you find the height of your school by measuring its shadow?

8. If you were out in the bush with a schoolfellow and he broke his fore-arm, what would you do until you could bring him to a doctor?

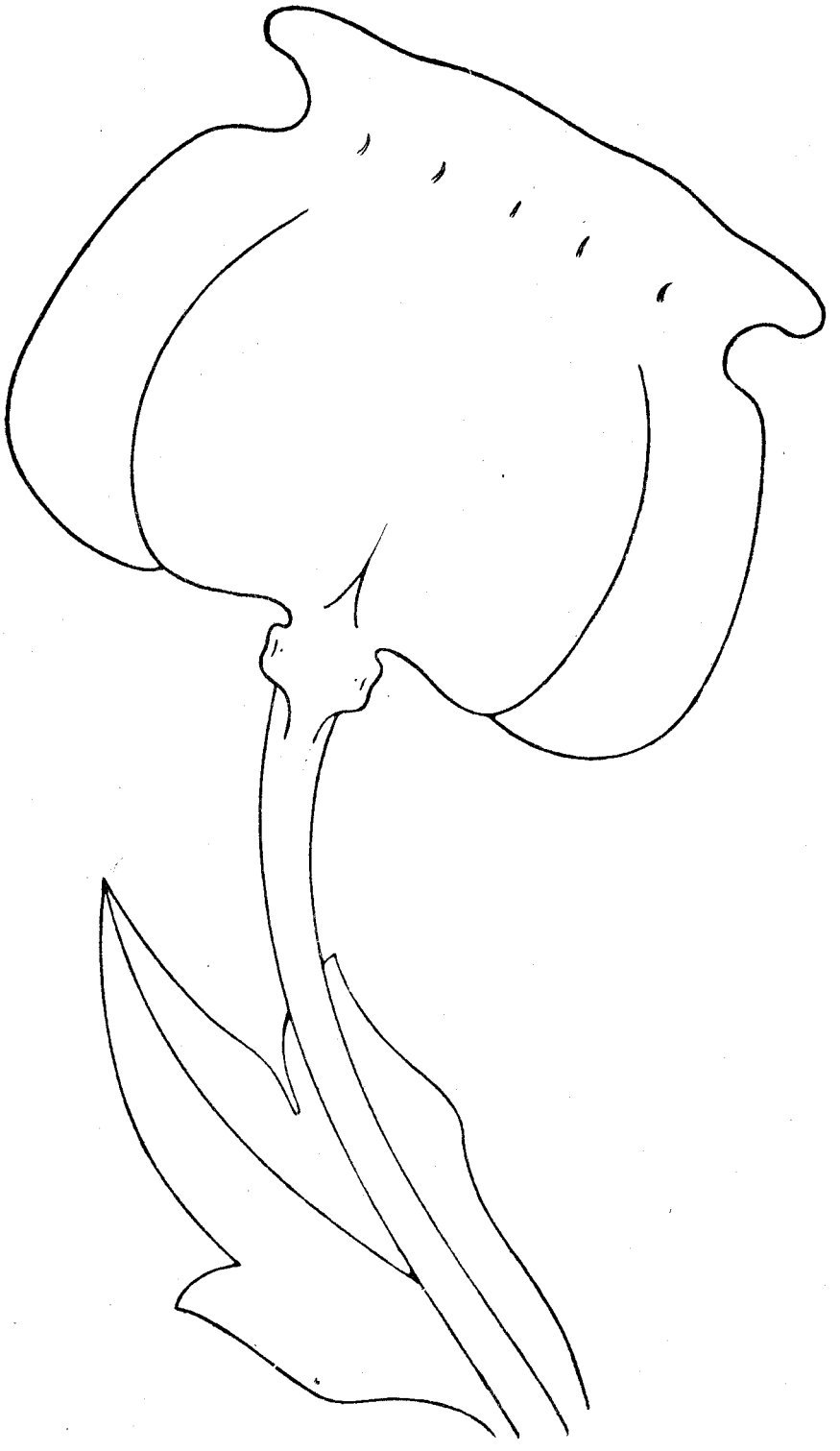
9. Explain the process of manufacture and the chief changes that take place during the manufacture of any one of the following: Butter, potato-starch, cheese, coal-gas.

10. You have a shilling, and want to send a telegram to a friend who lives near a post-office which has no telegraph: how would you send your telegram? Write out a telegram that might be sent.

11. State the different steps in the election of a member of Parliament.

12. State briefly what you know about any five of the following persons or characters: Mr. Squeers, Hamlet, Galileo, Garibaldi, Ivanhoe, Shylock, Mahomet, Bismarck, Livingstone, Alexander the Great.

Freehand Drawing.—For Junior National Scholarships. Time allowed: Three-quarters of an hour



INSTRUCTIONS.

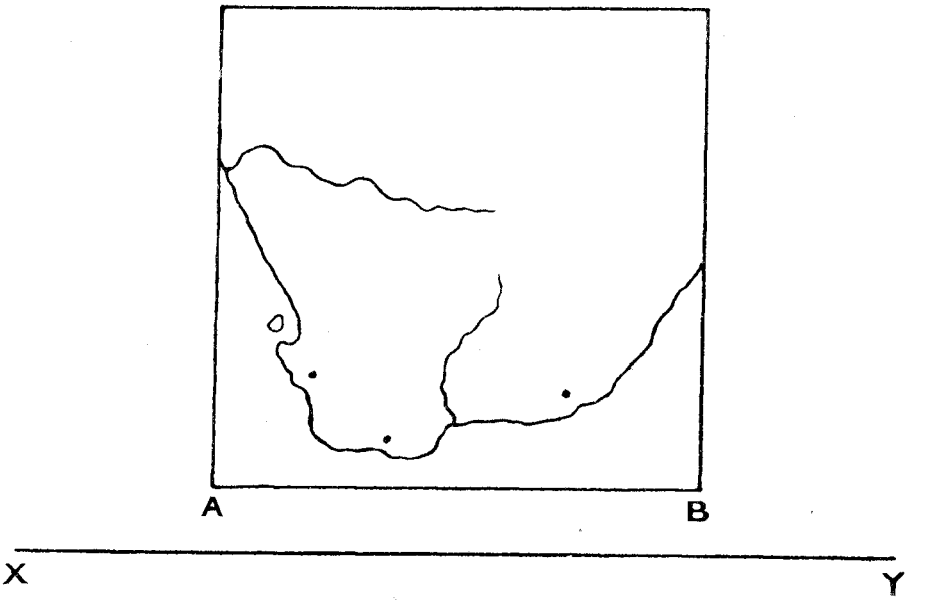
You are to make a drawing of this figure on the drawing paper supplied to you. The drawing must be *considerably larger* than the copy. The leading lines of the whole figure should be sketched in first and the drawing should then be completed, *as far as the time allows*, in clear outline.

Instrumental Drawing.—For Junior National Scholarships. Time allowed: Three-quarters of an hour.

N.B.—Three questions only are to be attempted.

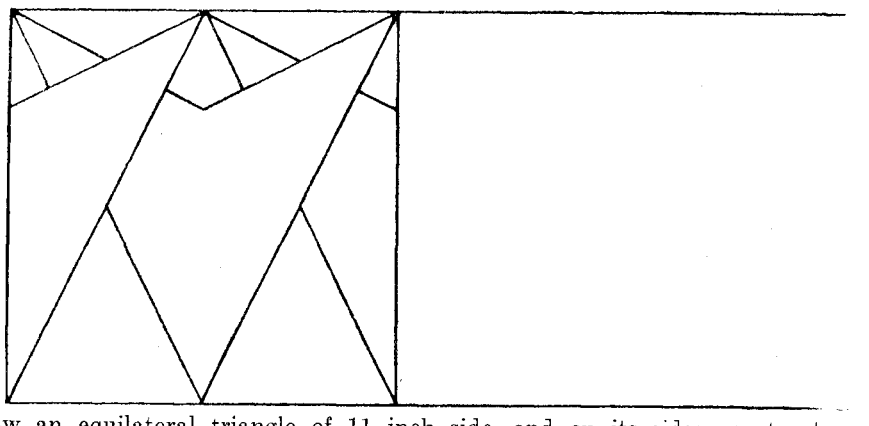
[CAUTION.—No credit whatever will be given for answers which appear to be the result of experiment—*i.e.* those in which the lines used to obtain the required result are not clearly shown.]

1. Make a proportional copy of the given map, enlarging the line A B to the given line X Y.



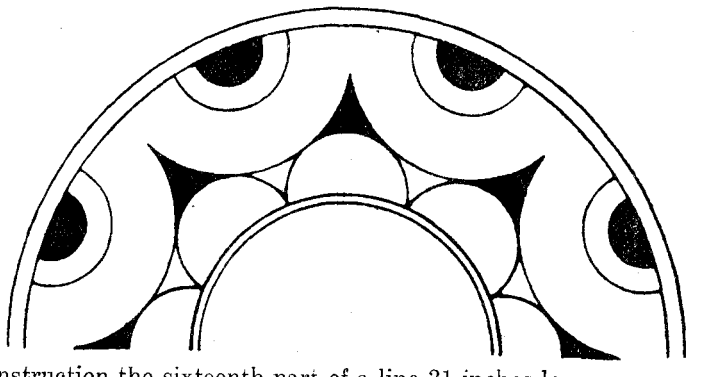
2. Draw a square of 2 inches side, and without it draw another square having its sides 1 inch from and parallel to the sides of the smaller square.

3. The given pattern is based on the square; copy it the same size, and repeat as much again, showing your construction lines.



4. Draw an equilateral triangle of $1\frac{1}{2}$ inch side, and on its sides construct respectively a rectangle with altitude $\frac{3}{4}$ inch, a hexagon, and a rhombus with an angle of 60°.

5. Make a drawing (which must be larger than the diagram) of the given pattern. The construction lines must be shown. You need not *finish* more than one half of your drawing.



6. Find by construction the sixteenth part of a line $3\frac{1}{4}$ inches long.

Approximate Cost of Paper.—Preparation not given; printing (3,925 copies), £51 18s.

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