1901. NEW ZEALAND.

## E D U C A T I O N:

# TEACHERS' AND CIVIL SERVICE EXAMINATIONS.

[In continuation of E.-1A, 1900.]

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.

· SIB.---

Education Department, Wellington, 30th April, 1901. I have the honour to report upon the annual examinations of candidates for teachers' certificates, and for admission to or promotion in the Civil Service. The examinations were held in January, between the 8th and 18th 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, Palmerston South, and Lawrence.

The number of candidates that entered was 1,204, made up as follows: For the Junior Civil Service Examination, 473; for the Senior Civil Service Examination, 99; for certificate examinations, 616; for drawing (pupil-teachers only), 16.

The expenses of the examinations amounted to £816 15s., and the fees paid by candidates to £951 10s. 6d. Printing and clerical work are not included in the account of expenses.

The results of the Civil Service Examination were made known on the 22nd February, and those of the teachers' examinations on the 26th of the same month.

Of the 99 Senior Civil Service candidates, 27 came up to complete examinations in which they had already been partially successful, and 1 sat for the examination in shorthand. In all, 33 passed the examination. (See *Gazette*, 28th February, 1901.) The names of 251 of the Junior Civil Service candidates were published, in the order of marks,

in the Gazette of the 28th February; and the remaining 222 failed to reach the minimum required, which is 40 per cent. of the possible total.

Of the 16 pupil-teachers who availed themselves of the regulation which allows them to come up for one branch of drawing at a time, 12 satisfied the examiner.

At the teachers' examination, 3 were candidates for Class C (University status being taken into account), 173 were candidates for the whole examination for Class D, and 138, having been credited with "partial success" for Class D, came up to complete their examination; 211 were candidates for the whole examination for Class E, and 91 came up to complete the examination for that class. Among these 616 candidates were 155 candidates who had already passed for

for that class. Among these 616 candidates were 155 candidates who had already passed for Class E, and were seeking promotion to Class D; and of the remainder-461 in number-99 were teachers in the service of the Boards, 238 were pupil-teachers, and 53 were normal-school students in training; while 25 were persons who had ceased to be teachers, pupil-teachers, or normal students, and 46 had never sustained any such relation to the public schools. Of the whole number of 616 candidates, 187 have "passed" (116 for D, and 71 for E), and 155 have achieved "partial success" (82 for D, and 73 for E), while 274 have failed to improve their status. Of the candidates that have achieved "success" or "partial success," 21 had previously failed. As the result of the examination, 136 new certificates will be issued (65 for Class D, and 71 for Class E), and 51 certificates of Class E will be raised to Class D.

1-E. 1A.

## E.—1A.

The following table exhibits some of these statistics :---

	Number	Results of Examination.									
Status before Examination.	of Candidates.	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	155	51	- 		31		82				
Teachers	99	8	16	1	7	6	38				
Pupil-teachers	238	27	41	2	$25^{*}$	51	146				
Normal students	53	. 23	3	1	15	5	47				
Retired	25	6	3		1	2	12				
Outside candidates	46	1	4		3	9	17				
Totals	616	116	67	4	82	73	342				

\* Includes two for Class C.

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

						D Passes.	E Passes.	E Passes, with Partial Pass for D.	Partial Pass for D.	Partial Pass for E.
I Candidates for promotic	on f	rom E to D 1	55 :			Ĺ				
Auckland					46	15			9	•••
Taranaki	•••				1					
Wanganui	•••				27	9	••		9	•••
Wellington					18	6			••	
Hawke's Bay				•••	9	1			2	
Marlborough					2					••
Nelson				• •	12	4	••		3	
Grev			••	• •	3		••		2	
Westland	••	••		••	3	2			••	••
North Canterbury	••	••	••	••	13	6	••		1	••
South Canterbury	••		••	••	3	2	••	••	1	•••
Otago .	••			· • •	3	1	••	• ••	••	
Southland	••	••	••	••	15	5	••		4	••
TT Candidates that have n	~+ ~	arrad hafara	161 .					· · · · · · · ·		
(a.) Teachers-99	or t	aaseu belore,	+01							
Auckland					17	1	· 4			2
Taranaki					4	1	••			
Wanganui			••	••	14	1	3	1	1†	1
Wellington		••	••		7	••	3			1
Hawke's Bay	•••				11		1		2	••
Marlborough			••	·	4	••	••	•••	••	
Nelson			• •	••	12	1	1		1	••
Grey	۰.	••	••	••	5	••	1	•••	2	· · ·
Westland	••	••	••	••	2	••	•••			1
North Canterbury	۰.	••	••	••	9	2	1	••	••	•:
South Canterbury	••	••	••	••	3	••	1		1	1
Otago	• •	••	••	••	8	2	• • • •	· ,.	••	••
Southland	• •		••	••	3		1			
(b.) Pupil-teachers-238,					67	9	10	1	9	15
	• •	. • •	••	••	7	U	10	· •	2	2
Taranaki	••	••	••	••	97		6	••	1+	7
Wallington	••	••	••	••	22	1	7	•	4*	5
. Wennigton	• •	••	••	••	16		5		1+	7
Marlhorough	11	••	••	••	7		4			2
Nelson	•••	••	•••	••	13	2	ī			5
Grav	••	••	••		7				1	3
Westland	••	••			4				ĩ	1
North Canterbury					10	1	2	1	3	2
South Canterbury					5	2	1			1
Otago					15	7			7*	
Southland			••	••	17	3	3	••	2	1
(c.) Normal students-53						* .				
North Canterbury	·	••	••	••	32	12	3	1	8‡	3
Otago	••		••		21	11	••	.,	7†	2
(d.) Candidates that have	e re	tired from th	e servi	ce, 25,	o ·	- 10 - 10 - 10 - 10 - 10 - 10 - 10 - 10				
Auckland	••	••	. • •	••.	1	••	••	•••	••	
Taranaki	••	••	••.	••	5	· · i		••	· · ·	1 <b>-</b>
Manbarana	••	••	••	••	⊿ 1	· · ·	••		•••	· · ·
Westland	••	••	••	•••	1	•••	•••	••	1	
North Centerbury	••	••	•••	••	4	i i i		1		•••
South Canterbury	••	••	••	••	3	-	2			1
Otago	•••	• •	•••	••	9	4		••	i	1
Southland	••	••	••	••	2 .		1		L .	
	••	••	• •	••			÷			
* Including one whose work co	ount	s for Class C. wh	† lo also	including gain parti	one who al pass f	o also gains for Class E.	partial pas	s for Class I	E. ‡In	cluding two

						D Passes.	E Passes.	E Passes, with Partial Pass for D.	Partial Pass for D.	Partial Pass for E.
(e.) Candidates that h	ave no	t been in	the serv	ice, 46,-	-			ļ		
Auckland	••	••	••		15	í	2	l	· · ·	4
Taranaki	••	••	••	• •	1		••			
Wanganui		••	••	• • •	1	•••	••		••	1
Wellington	••	••	••	:.	3		1		••	••
Hawke's Bay	••	••	••	••	1		••	·		••
Marlborough	• •		••		3	· · · ·	••		•••	1
Nelson		••	••	• •	3	1 1	••			] <b></b> .
North Canterbu	ry		••	••	3		••		2†	1
South Canterbu	ry	••	••	••	3	.	••		••	••
Otago	•••	••	••	• •	6					2
Southland	••	••	••		7	1	1		1	
						1 1				1

#### † Including one who also gains partial pass for Class E.

CIVIL SERVICE EXAMINATIONS.

					Senior Ex	amination.	Junior Examination.			
P	lace of	3e of Examination.		Number of Candidates.	Number passed.	Number of Candidates.	Number successful.			
Whangarei.	••		•••		4	1	5	4		
Auckland .	••	•••	•••		22	7	98	36		
Thames .							7	4		
Tauranga .	••						2			
New Plymor	1th				3	•••	15	5		
Wanganui .					4	1	9	7		
Palmerston 1	North				• • • •	•••	3	1		
Wellington		•••			28	12	61	30		
Masterton .			•••		1		11	- 3		
Napier .	••.	· · · ·	•••		· 4	1	17	8		
Gisborne .	••				•••	•••	2	. 2		
Blenheim .	••	•••			<b>2</b>	1	10	6		
Nelson .		•••	•••		2	•••	13	9		
Westport .	••		•••		1	•••	14	11		
Greymouth.	••				4	1	22	12		
Hokitika .							14	11		
Christchurch	ı				. 7	2	41	23		
Timaru .	••		• • •		1	•••	16	8		
Oamaru .					3		17	13		
Palmerston 1	South	•••				•••	5			
Dunedin .	••	•••			7	4	57	36		
Lawrence .			•••		•••	•••	13	12		
Invercargill		•••	•••	•••	6	3	21	10		
Tot	als	•••			99	33	473	251		

#### EXAMINATION LISTS.

I.-PASSED FOR CLASS D.

Bergen and the second s Auckland-Read, Thomas

Auckland—continued. Rees, Bertha Lloyd Richards, Nora Roberts, John Frederick Snell, Edgar Frank Tidmarsh, Henry Herbert Collins Taranaki-Thomas, Richard Edwin Wanganui Baker, Sybil Evelina Baker, Sybil Evelina Buchler, Arthur Owen Gordon, Maria Melhuish Gordon, William Midleton Hunger, Måry Ann Ironmonger, Edwin Lovell Marshall, James Edwin Matheson, Roderick Maunder, George Thomas Neilson, Mary Opie, Francis Dudley Biohardson, Elizabeth Mar Richardson, Elizabeth Mary Swinbourn, William Alexander

Wellington— Clark, William Henry Diark, william Henry Dempsey, Sidney William Jobnston, Nita Kelleher, Caroline Helena McBain, Alexander McKinnon, Charles James Wedde, Albert Augustus Hawke's Bay— Garry Francis Albert Garry, Francis Albert Guy, Mary Eveline

Nelson-Barber, Minnie Best, Frank Dockery Fair, George Osmond Gilbert, Esther Ellen

Hill, Hollis James

- Horner, Francesca Mary Seldon, Edith Jessie
- Westland-

Aitken, Williamina Innes McCarty, Catherine Mary

North Canterbury-Adams, Elizabeth Maria Chapman, Herbert Chapman, Herbert Gates, Thomas Adkisson Gow, Alexander Grogan, Ellen Harding, Albert John McLean, Caroline Mascor, Rose Hellen Mulville, Neptune Roe Nicoll, Thomas Alexander O'Brien, Maud Nora Jessie Offwood, Mabel Emily Ormandy, Guy Nathan Penlington, Benjamin Penlington, Benjamin Rogers, Edith Frances Henrietta Seiton, Percy James Seiton, Ferdy James Silcock, Fredrick Arthur Steele, Elizabeth Turnbull, Mary Anna Wauchop, John Stewart Wells, John Henry Wilson, Jessie South Canterbury Cooper, Emma Cormack, Elizabeth Park, George John Strachan, Barbara Otago-Alexander, Ann Crawford Alexander, Mary Drysdale Aris, Elizabeth Gray Armour, William Allan Armour, William Alla Barr, Beatrice Helen Chalmers, Ellen Jane Cotton, Amy Matilda Cottrell, Arthur John Donald, Annie Howe Edie, John Kerr Callowsy, Agnes Japa Galloway, Agnes Josephine Guffie, Selina Hoperaft, Victoria Kate Jones, Lilian Frances Kelk, Henry Phillipson McCulloch, Christina McGregor, Isabella Provo, Gertrude Howe Robertson, Jane (ii) Roseveare, Charles Joseph Scott, Jane Clark Scott, Jane Clark Shearer, Florence Smith, Lucy Evelyn Digby Steel, Robina Eliza Waugh, Margaret Annie Phillips Southland— Brownie, William Brownlie, William Fairbairn, Elizabeth McKay, James George Merrie, Thomas Poynter, Zoe Esther Selby, Bertha Graceabella Sproat, William Albert Taylor, Matilda Ward, Edward Harvey PASSED FOR CLASS E. uскiand— Brett, Evelyn Lillian Casey, Clara Emily Dean, Margaret Agnes Isabella Gar-lick Auckland-Dinneen, Charlotte Kate Dalton Doull, John Stuart Downard, Frederick Newman Reeve Gillibrand, Winifred Hall, Laura Louise Heney, Dora Annie Hutton, Robert Guthrie McCowan, Elizabeth Margaret Motion, Margaret Pensford, Mary Elizabeth Richardson, Florence Harriett Gertrude Short, Emma Mildred Turnbull, Jacobina Margaret Wool er, Harold James Taranaki-Beedle, Jeannie Ann Johnson Liddle, Agnes Wanganui Billens, Mabel Ellis Hills, Charles Cleaver

Lavery, Agnes

Wanganui—continued. Mantle, Alice Mary Mowbray, Lucy Ord Parkes, Grace Lucy Relling, Thorsten Frederick Robson, John Templeton Tew, Winifred Erica Howell Wallace, Esther Wellington— Wellington-Anderson, Wigo Fellingham, Rebecca Gallagher, Nellie Goldsmith, Annie Katharine Gould, William Horace Hayes, Elizabeth Annie Higgins, Vivian Mousley, Annie Enid Newton, Emma Amelia Oxley, Jessie Wallis, Eliza Hawke's Bay— Barrie, Ethel May Cooper, Charlotte Maude Dugleby, Enid Alethea Hartshorn, Edith Emily Lindsay, Elizabeth Earl MoVay, Nellie Deucbar Marlborough— Higgins, Vivian Mariborough-Fuller, Violet Ethel Girling, Emily Millicent Litchfield, Alice Rose Ellen Macalister, May Nelson-Marris, Amelia Wright, Julia Catherine Grey McDonald, Mildred Louisa North Canterbury— Bowden, Bessie Ethel Curtis, Nellie May Hardey, Mary Isabelle Kent, Helen Mildred King, Herbert William Lanyon, Harriet Beecher Orr, Annie Elizabeth Porter, Catherine South Canterbury— Cartwright, James Hutton, Janet Cunningham Lawlor, Mary Kate Wharton, Mary Southland— Brennan, Margaret Hannan, Cecilia Orr, Charlotte Elliott Park, William Fraser Powis, Mary Reid, Alice Marion II.—OBTAINED "PARTIAL PASS" FOR CLASS C. (University status being taken into account.) Wellington-Ross, Jane Wood Mein Otago-Harrison, Wilkinson Lewins OBTAINED "PARTIAL PASS" FOR CLASS D. Auckland-Bayly, Robert Horatio Roy Byles, Frank Roussel Cahill, William John Fisher, Nellie Worsley Gillespie, William Rollo Hill, Ida Hoe, Mary Lowrie, William Masson, William Piggot, Ellen Mary Sutton, James Wilson, Ebenezer Wooller Harold Ja Wooller, Harold James Taranaki-Brownlee, Marian Kathleen

Thompson, Florence Lydia

anganu— Alcorn, Kathleen Millicent Bassett, Louis William Black, Elsie Violet Gabites, Frederick George

Wanganui-

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Wanganui—continued. Gatton, Clara Maude Mary Gordon, Jane Young Liggins, Charles William Lyall, George Alexander Lyall, Henry Bohm, John Mampiatan Robson, John Templeton Scott, Mary Watts, Walter James Wellington--Mason, Francis Augustus Thompson, Frederick Grenville Zohrab, Clara Melita Holmwood Hawke's Bay— Fyers, Christiana Mickle, Paul Alexander Douglas Riley, Emma Jane Siddells, Amy Isabella Wilson, Henry Leonidas Nelson-Allport, Edith May Sanders, Herbert Basil Score Street, Samuel William Wilkes, Minnie Louisa Grey-Beresford, Mabel Easson, Edith Amy Hargreaves, Alice Mary Moore, Isabella Weenink, Agnes Mary Ann Weenink, Agues man, .... Westland... Stark, Elizabeth May North Canterbury... Bowden, Bessie Ethel Garton, Wilfred William Hardey, Mary Isabelle Harvey, Patrick Hughes, Alice Mary Harvey, Patrick Hughes, Alice Mary McKinnon, Jessie Helen Morgan, Richard William Oram, Harry Peppler, Catherine Craig Pratt, Colonel Frank Ryan, Agnes Sounders Arr Saunders, Ann Sörensen, Ethel Stanley, Alice Thompson, Robert John Wraight, Grace Maud South Canterbury-Goodall, Agnes Straughon Riordan, James Peter Paul Otagotago— Anderson, Agnes Barkman, Olivia Martha Bringans, Robert Christie, James Hay, John Alexander <sup>Unixe</sup> Alfred Andrew Su Hay, John Alexander Hintz, Alfred Andrew Sutherland Jones, Florence Alloe Mitchell, Winnifred Martha Orkney, Daisy Mary Paterson, Thomas Pretsch, Annie Mary Rodger, William Uttley, George Harry Wilson, Dinah Southland— Acheson, Catherine Edith Ann Carswell, Helen McAllister, Agnes Gray Mackenzie, John Alexander McKillop, David Sutherland Wilson, Elizabeth Martha Wilson, Maud Matilda OBTAINED " PARTIAL PASS " FOR CLASS E. Auckland-

Allely, Sarah Maude Angove, Alice Hilda Attwood, Frederick Charles Catran, James George Collins, Jane Elsie Fulton, Samuel Hall, Sylvia Elizabeth Hamilton, Lucy Harden, Violet Margaret Hook, Alfred Charles Johnson, Jane Kelly, Laura Mabel Kenny, Arthur Alphonso Laing, Arthur Ernest

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Class E.

Auckland-continued. Mackay, Thomas Etheridge Alexander Miller, Armstrong Kichard de Montalk, Emily Littré Phipps, Alice Ruth Teesdale, Jacob Tallentire Toy, Alice Maud Wilson, William (ii) Taranaki-Meyenberg, Arthur Maurice Smith, Violet Ethel Sybil Wright, Jane Wanganui-Alcorn, Kathleen Millicent Bassett, Louis William Blennerhassett, Emily Gordon, Kathleen Gould, Arthur Mason McEwen, Alethea Hope Andrina Small, Marianne Annie Taylor Walker, Louis John Young, Ethel Eliza Samson, Hettie Maud Marlborough— Brennan, Josephine Mairé Bull, Edith Linda Jeffries, Emily Veronica Nelson-Josephson, Gertrude Ellen Kelpe, Caroline Kitching, Beatrice Marion Rogers, Marmaduke Wright, Gwendoline Florence Grev Barnhill, Margaret Luoy Byrne, Katie Agatha Watson, Mary Elizabeth Westland-Garglidich, Mandelian Moore, Marguerite Dorothy North Canterbury— Barker, Mary Frances Lawrence, Edith Marion Morgan, Richard William Oram, Harry Pavitt, Clara Isabel Ryan, Agnes South Canterbury Ellis, Leonard Richmond Oliver, Amy Ellen Elizabeth Otago-Barkman, Olivia Martha de Lambert, Elizabeth Susan Eudora Lyders, Caren Louise

Otago-continued. Rice, Alice Caroline Ward, Emily Rosena English— Southland-Robinson, Mary Kate III.-PRIZES. Class D Experimental science-Harding, Albert John, North Canterbury First Mulville, Neptune Roe, North [ prize Canterbury ilcock, Fredrick Silcock, Fredrick Arts Canterbury, third prize Arthur, North Classes D and E. Drawing-Petrie, Alice, Wellington, first prize Oliver, Amy Ellen Elizabeth, South Canterbury, second prize Brownlee, James Little, Auckland, third prize IV .- SPECIAL MENTION. Class D. English-Armour, William Allan, Otago Neilson, Mary, Wanganui Penlington, Benjamin, North Canterbury Arithmetic-Garton, Wilfred William, North Canterbury Hardey, Mary Isabelle, North Canterbury Harrison, Wilkinson Lewins, Otago Harrison, Wilkinson Lewins, Otago McGregor, Isabella, Otago Neilson, Mary, Wanganui Rodger, William, Otago Trimmer, John Henry, Hawke's Bay Uttley, George Harry, Otago Wells, John Henry, North Canter-bury bury Geography Brownlie, William, Southland Gabites, Frederick George, Wanganui McKay, James George, Southland Read, Thomas, Auckland Ward, Emily Rosena, Otago History Brownlie, William, Southland Neilson, Mary, Wanganui Riley, Emma Jane, Hawke's Bay Agriculture-Isemonger, Thomas, Auckland Wells, John Henry, North Canterbury Algebra Fairbairn, Elizabeth, Southland Garton, Wilfred William, North Canterbury Ray, John Alexander, Otago Rodger, William, Otago Stanley, Alice, North Canterbury Uttley, George Harry, Otago

Emily Millicent, Marl-Girling. borough Grogan, Ellen, North Canterbury Hall, Sylvia Elizabeth, Auckland Morgan, Richard William, North Canterbury Rogers, Edith Frances Henrietta, North Canterbury Tew, Winifred Erica Howell, Wanganúi Arithmeticrithmetic— Christie, James, Otago Gould, Arthur Mason, Wanganui Josephson, Gertrude Ellen, Nelson Kitching, Beatrice Marior, Nelson Marshall, James Edwin, Wanganui Geography Harding, Albert John, North Canterbury Hook, Alfred Charles, Auckland Kent, Helen Mildred, North Canterburv Litchfield, Alice Rose Ellen, Marlborough Marshall, James Edwin, Wanganui History Gould, Arthur Mason, Wanganui Macalister, May, Marlborough Elementary science— Gould, Arthur Mason, Wanganui Park, William Fraser, Southland Stevens, Edward Comins, Auckland Agriculture-Attwood, Frederick Charles, Auckland Hook, Alfred Charles, Auckland Domestic economy— Brennan, Josephine Mairé, Marl-borough Girling, Emily Millicent, Marlborough Hartshorn, Edith Emily, Hawke's Bay King, Katie, Hawke's Bay Macalister, May, Marlborough Moore, Marguerite Dorothy, Westland Classes D and E. Drawingrennan, Josephine Mairé, Marl-borough, freehand Brennan, Galloway, Agnes Josephine, Otago, freeband Hall, Laura Louise, Auckland, freehand Macalister, May, Marlborough, geometrical Oliver, Amy Ellen Elizabeth, South Canterbury, freehand Rees, Bertha Lloyd, Auckland, freehand Selby, Bertha Graceabella, Southland, freeband Weenink, Agnes Mary Ann, Grey, freehand

Wilson, Henry Leonidas, Hawke's Bay, geometrical 13.

49.

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Hall, Thomas Donald Horn

McNair, John ... White, Charles Botham

Macfarlane, Hugh McNeill Gor-

McCarthy, Alfred

don

SENIOR CIVIL SERVICE EXAMINATION.

Passed with distinction— Robertson, Isabel Wild, Cyril Thomas Passed— Arcus, John Laurence Armstrong, Gertrude Henderson Avery, Joseph Devonport Baldwin, Vawdrey Richardson Benge, Alfred James Havelock Bogle, Archibald Hugh Campbell, Lachlan Bain Collins, Rhoda May Colquhoun, Edith Jane Davey, Ivor Easton, Charles Ernest Furlong, James Joseph Gibbs, Arthur Gilmour, Emily Margaret Girdlestone, Hubert Earle	Auckland. Invercargill. Greymouth. Wanganui. Wellington. Waihi. Wellington. Auckland. Wangarei. Wellington. Junedin. Waihi. Wellington.	Passed—continued. Hallett, Edgar Joseph Whebby Hay, Elizabeth Kerr Hovell, Rollo Richard St. John De Lambert, Richard Lovatt, Cyrus James McIntosh, Lizzie McKellar, Gerald Forbes. Matthews, Frederick Gwillim Robertson, James Scobie, William Snell, Agnes Maud Taylor, Ella Millicent Trownson, Charles Owen Walker, Clarice Agnes Redpath Wood, John Passed examination in shorthand Marple, Walter Henry	<ul> <li>Christchurch.</li> <li>Wellington.</li> <li>Napier.</li> <li>Wellington.</li> <li>Dunedin.</li> <li>Wellington.</li> <li>Invercargill.</li> <li>Riverton.</li> <li>Christchurch.</li> <li>Auckland.</li> <li>Dunedin.</li> <li>Wellington.</li> <li>Blenheim.</li> </ul>
<ol> <li>Robertson, Isabel</li> <li>Campbell, Lachlan Bain</li> <li>Boult, Charles Norton</li> <li>Gillespie, Olliver Noel</li> <li>Wild, Cyril Thomas</li> <li>Christie, James</li> <li>Farquharson, Robert Alexand</li> <li>Benge, Alfred James Haveloci</li> <li>Grant, Margaret Grace Dona son</li> <li>Nash, Margaret Elizabeth</li> </ol>	JUNIOR CIVIL SER Auckland. Waipu. Whangarei. Bangiora. Draki. Lawrence. er Mornington. k Waihi. kl- Newmarket. Picton.	<ul> <li>VICE EXAMINATION.</li> <li>64. Anderson, George</li> <li>65. {Laurenson, Thomas Peter {West, Percy Midgley</li> <li>67. {Iles, Edward James</li> <li>69. Burge, Archer Edward</li> <li>70. {Lowry, John William O'Leary, John Francis</li> <li>72. {Osborne, Gordon Leslie Thompson, William</li> <li>74. {Buckley, William Joseph</li> </ul>	<ul> <li>Greymouth.</li> <li>Dunedin.</li> <li>Dunedin.</li> <li>Dunedin.</li> <li>Charlestom.</li> <li>Belgrove.</li> <li>Woolston.</li> <li>Taieri.</li> <li>Turua.</li> <li>Mornington.</li> <li>Hook.</li> </ul>
11. Menzies, James	Hakataramea.	' Learmont, Jeanne	Hokitika.

man man (Craik, Mabel Rose Kathleen Uren, Garnet Tudhope, William ... Maxwell, Matilda .. Lawrence. 14. • • 16. .. Oamaru. 17. •• Schramm, Dora Margretha Hokitika. 18. .. 19. Ralston, Martha Bluespur, Law-•• rence. Wanganui. Purnell, George Proctor Cooper, Jessie Flower Taylor, Ella Millicent 20. 21. .. Auckland. 22. Watterson, Catherine Mona Cowles, Georgiana Agnes Kenyon, Helen McGregor Walker, Clarice Agnes Redpath Grevmouth. •• Nelson. .. Dunedin. 24. Lyttleton, George Clyne Hodges, David Lillie Gillies Patrick, John Crumbie Christchurch. 27. . . Mosgiel. 28. .. Waitahuna. 29. . . Rae, Robina .. Copeland, William McCaul, George W. Bogle, Gilbert Vere Roxburgh. Te Puke. 30. 31. .. 32. Bunnythorpe. . . . . Napier. .. 33. Worrall, Louisa . Fairbairn, Williamina Butler, Donald . Epsom. .. Invercargill. 35. . . Darfield. •• Campbell, Owen Neil.. Thomas, Minnie Adeline Luks, Ernest Franz ... 36. Waipu. . . Lawrence. . . Auckland. Luks, Ernest Franz ... Mitchell, Thomas ... Scobie, William ... Prichard, George Pollard (Colquhoun, Edith Jane Hansen, Laura Will, George Wishart (Byrne, Edith May ... Patterson, Hugh Madden, Richard Francis • • 39. Hokitika. ... Riverton. 41. Christehurch. 42. ۰. Whangarei. . . 43. Thames. • • 45. Lawrence. Christchurch. .. 46. Reefton. Patterson, Hugh Madden, Richard Francis Withers, Geoffrey Tyndall Perry, Garnet Charles Isherwood, Grace Isabella (Davis, Geoffrey Harold Meston, Jane Margaret Fraser, Gordon Macintosh Gillies, Amelia Florence Jessop, Elsie May McKinnon, John Alexander (Govan, Horace Osborne Hall, Thomas Donald Horn • • Wellington. 48.

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Hokitika.

Dunedin.

Dunedin.

Hokitika.

Burnside.

Westport.

Wellington.

Wellington.

Greymouth.

Wellington.

.. Blenheim.

Christchurch.

New Plymouth.

Wellington.

Woodhouse, Florence Ellen

Stocker, Eustace Dupuis Hench- Wellington.

Roslyn.

Learmout, Jeanne ... McLeod, Jessie Christina ... Martyn, Laura ... Newlands, William ... Teutenberg, Ludwig Arnold Ber-.. Hokitika 76. Auckland. 77. Hokitika. Dunedin. 78. thold .. Auckland. 80. Napier. . . Greymouth. Mataura. .. 81. ÷. •. Scott, Jessie Anne Black, John Wilkinson Millar, Frank Winford Christchurch. .. Lawrence. •• 84. . . Roslvn. Penfold, Richard William Oamaru. • • Lind, Madeline Cornwell, Thomas 87. .. Invercargill. • • 88. Auckland. Smyth, Clifford Cansick Dodds, Gordon Wellington. Ashburton. 89. • • ••• 90. Frethey, Walter Knight Adams, Gertrude Theresa Kennedy, Mary Jane... Wellington. . . . . Christchurch. 92 ••• Invercargill. Hutcheson, George Rae Plank, Charles Selwood Ray, Mabel Annie Wellington. . . 94. • • .. Pleasant Point. Jones, Florence Marie de Vaynes Auckland. 97. McCallum, Hugh A. . . Dunedin. Matheson, Mads Robert Gordon Ravensbourne. Vickery, Thomas Webb . . Dunedin. Wilson, Isabella McVean . . Oamaru. 99. Downes, Cecil Glass ... Park, James Miller ... Beasley, Thomas Hayes Noble... Morpeth, Allan Masterton. 102. Oamaru. Wanganui. 104. Auckland. •• Morpeth, Allan ... Balneaves, Kate ... Maopherson, Donald Gregory ... Clapperton, Catherine ... Dawson, John ... Scantlebury, Percival John ... (Corcoran, Daniel ... Hardy, John ... Mataura. 106. Waimate South. Roslyn. 108. Hastings. Reefton. Oamaru. Waimate South. 111. Williams, Harold Walter Williams, Sophia Bartley Northcroft, Erima Harvey Roslyn. ۰. Reefton. • • 115. Hokitika. •• MoInterfort, Erima Harvey McIntire, Robert Spencer (Cormack, Isabella Darling, Rose Evans, Daisy Alice Mary Hart, May 116. Blenheim. • • Lawrence. .. 117. •• Roslyn. Timaru. ... 120. .. Christchurch. 121. Wellington. 123. Ashburton. Warner, Frederick Stephen Hol- Christchurch. loway Carter, Norah 126. Wellington. . . 127. (Goulter, Cecil Vernon Scanlan, John Thomas .. Blenheim .. Milton.

#### JUNIOR CIVIL SERVICE EXAMINATION-continued.

129.	(Harding, William Guy Prendeville, John Henry	Thames. Wellington.
131.	Dunstan, Percy	Thames. Wellington.
	White, Winifred Ella Clare	Greymouth.
134.	Clark, Henry.	Lumsden.
137.	Anderson, Helen Maud Boland, Catherine Ada	Napier. Christchurch.
	(Gilbert, Reginald George Chan-	Nelson.
140.	Steedman, Mary Maud	Wanganui.
142.	Barrett, Henry Robert	Wellington.
144.	(Knox, John Albert	Dunedin.
145.	Greenwood, Hilda May	Wellington.
146.	Jowitt, Alfred	Auckland.
148.	Baumgart, Andrew Lawrence	Wellington. Bangiora
150.	Martin, Phyllis Ethel	Whangarei.
	(Turnbull, Frank Kingdon (Hurley, Frank	Napier. Nelson.
152.	Patterson, Edward John	Auckland.
155	Twose, Richard Henry	Christchurch.
100.	Whelan, Julia Cecily	Wanganui. Dunedin
157.	Lewis, Ruth	Nelson.
159.	Moffat, John Baird	Westport.
169	(Smith, Vivian	Hastings.
163.	Reynolds, Howard Hector	Hutt.
	(Calder, James McBeath Dykes, Robert Preshaw	Dunedin. Reefton
	Whelan, Frances Helen	Wanganui.
167.	Lowe, Arthur Ernest	Auckland. Napier.
170	(Parsons, George Harold	Kaikoura. Waihi
171.	Lambert, E. Thomas Stoddart	Wellington.
172.	Clark, George Smeaton	Thames. Auckland.
174.	Mander, Alice Marion	Wellington.
1175	Arthur, Clarence Adolphus	Wellington.
175	Casey, Eugene	Napier.
179.	Speight, Mary Violet	Auckland.
i	Arcus, Lawrence Herbert	Petone. Wellington.
100	Fraser, John Myers	N. Taieri.
180.4	McIver, Sarah	Christchurch.
	Powell, Ronald Sidney Welling-	Westport.
186.	Downard, Ebenezer Thomas Owen	Parua Bay.
187.	Carpenter, Richard Ewen	Remuera.
100. 100. (	Hill, Jessie Amelia	Westport.
1091	Morris, Gladys Millicent	Wellington

191.	Gribble, Norman Gillard	Whangarei.
	(Beckett, Evelyn Randal	Waimate South.
192	Cunningham, Percy Frederick.	Rangiora.
100.	Guise, Cecelia Alice	Wellington.
	(Swarbrick, Frederick Arthur	Auckland.
	(Cowles, Amy Louise	Richmond.
196.	Griffiths, John Haldane	Petone.
	Morpeth, Hector	Auckland.
199.	Parton, David Edwin	Masterton.
	(Anderson, Amy Elizabeth Mary	Invercargill.
200.	Lowry, Mary Amy	Woolston.
	Baron, Robert Walter	Dunedin.
	Fletcher, Gertrude Bose	Nanier.
202.	Gordon Douglas	Auckland
	Wright, Mary Struthers	Christehurch.
	(Hannon Michael Joseph	Wellington
206.	Moran Florence	Weinigton:
	(Delargey John James	Dunedin
	Everist William Manuface Lisso	Christehurch
208.	man	Unristenuren.
	Tudaan Manahall Hanny	Kainana Elata
	(Hudson, Marshan Henry	Naipara Flats.
011	Brewster, nex Carrington	New Plymouth.
211.	Egan, Robert Martin	Hastings.
	Lyle, Agnes Welsh	Pleasant Point.
214.	Davis, James Alexander	Dunedin.
	(Hutton, James	Johnsonville.
216.	Naphtali, Woolf	Dunedin.
210.	Rule, William	Oamaru.
· · ·	Borrie, John Arthur	"
218	Lyons, David Stanley	Stafford.
	McIntosh, Duncan Malcolm	Masterton.
1	Bent, Ethel W	Waitara.
221	McGill, Hugh	Ross.
1	O'Connor, John Patrick	Timaru.
	Anderson, Peter Johan	Port Chalmers.
	Chamberlain, May Margaret Su-	Wellington.
224	sanna	-
	Radford, Walter John Tutty	Westport.
	Richdale, Henry Thomas	Port Chalmers.
228.	Taylor, Clara Millicent	Stratford.
	Mills, William Athol	Westport.
229.	Scott, Charles Edward	Auckland.
01	Tuck, Jenny Florence	New Plymouth.
232.	Carroll, Patrick Stephen	Lvell.
	Hannan, John William	Greymouth.
233.	Johnston, Bohert Foster	Gisborne.
	Boland, Edward James	Darfield.
	Hudson Wellesley Burgovne	Wellington.
225	Hunt Christian	() chington
	Smith Daisy Alfreda	Ross.
	Towers Maude	Auckland
	Finlayson Malcolm Innes	Maungaturoto
940	MaDonnell Nellie	Groumouth
240. ]	O'Kane Gorald William	Wellington
	Cowan Dallag Marian O'Noill	Anakland
(	Jong Dichard	Diston
040	Moolean Loglic D	Travenegacili
245	Mackay, Desile D	Thvercargin.
. 1	Mallen Alfred Tomos D' 1	nangata.
1	walker, Alfred James Dick-	Auckland.
0.40	son	NT 1
248.	McOartny, Florence	ineison.
249.	Doig, william Torrance	Constitution.
	Te wnakaheke, Hamaka	Uambridge.
Z51.	Tate, George Edward Wray	Kienmona.

## EXAMINATION PAPERS.

School Management and the Art of Teaching.—For Classes D and E. Time allowed : 3 hours. [All the sections should be attempted, but not more than one question may be taken in any one section. Sections I., II., and III. are specially important.]

#### SECTION I.

- 1. Explain clearly the chief principles that would guide you in forming a time-table.
- female pupil-teacher.
- (b.) For the upper department of a country school, with 45 pupils in Standards III. to VI. Staff,---master and a first-year female pupil-teacher.

#### SECTION II.

1. Write full teaching notes of a lesson on one of the following subjects, saying for what class your lesson is prepared :-

(a). The Post Office and its work.(b.) Form or colour (kindergarten lesson).

(c.) General management of a sick-room (for elder girls).

(d.) Federation.

(e.) A New Zealand mountain range.

(f.) Thermometers.

#### SECTION III.

1. State the items of information which are furnished by the Admission Register concerning each pupil. What other official registers are in use in the public schools?

#### SECTION IV.

1. Under what circumstances do the regulations of the Department permit a teacher to resort to expulsion or suspension? What course of action may the guardian of the punished child take in its interests?

2. What considerations should guide you in the choice of (a) a set of readers, (b) a set of copy-books?

3. "Moral training implies sympathy between parent (or teacher) and child." Inquire into the meaning of this statement, and compare the general moral effect of a severe discipline with that of one which appeals to personal affection and sympathy.

#### SECTION V.

1. Enumerate the different kinds of punishment that you think may rightly be used, and explain the principle of selection in each case.

2. State some of the causes of truancy, and explain the manner in which you would treat the offence.

3. State some rules, both positive and negative, that would guide a teacher in framing good questions for teaching purposes.

#### SECTION VI.

1. A school building has to be planned for 200 boys and girls between the ages of five and fifteen. Describe such a building, with a particular description of a girls' class-room properly warmed, lighted, and ventilated, and furnished for 40 children. Give a plan of the room.

2. You wish to produce in the future a good style of English composition in your upper classes. Sketch a scheme of procedure in instruction for the whole school. The instruction is supposed to

extend over the whole period of an individual pupil's school career. 3. Explain fully how you would proceed to teach simple interest to a class in Standard V. If the children show a want of accuracy in the elementary processes of arithmetic, how would you correct this common fault?

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

1. Point out the fundamental difference in meaning between the terms (a) mass and weight, (b) force and work, (c) momentum and energy.

2. How would you make a simple barometer for school use? What defects would such an instrument probably have? How would these defects be avoided in a properly constructed barometer?

3. Make a neat diagram showing how the discharge pipe from a well arranged water-closet pan is trapped and ventilated. What special precaution should be taken in placing the wastepipe from a bath? Give reasons for the arrangements you describe.

4. Upon what does the pitch of a musical note depend? Explain clearly how you would test the truth of your statement.

5. What is the focal length of a lens? Describe two methods whereby the focal length of a double convex lens may be determined.

6. How could you show -(a) That water gives off steam at all ordinary temperatures, (b) that the pressure of saturated steam rises with the temperature until at the boiling point of water it is equal to the atmospheric pressure?

7. Make a sketch of an ordinary candle flame, and state what changes you believe to take place in the various parts of it.

8. Describe and explain the action of either a magneto-electrical machine or a simple telephone.

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

1. Explain the physical changes that take place when a piece of ice is gradually heated to a temperature of  $100^{\circ}$  C.

2. Describe experiments to illustrate the pressure of air.

3. Give examples showing the different kinds of levers, and explain the action of a lever of each kind.

4. A gun is fired in front of a cliff, and an echo is heard five seconds afterwards : ascertain the distance of the cliff, assuming that the temperature of the air is 10° C.

5. What is the velocity of light? How has it been determined?6. Two tubes containing water are heated, one at the top and the other at the bottom : how is the heat transmitted in each case?

7. What are the effects produced by passing a current of electricity (a) through acidulated water, (b) through a thin platinum wire, and (c) through an insulated wire surrounding an iron bar?

8. Describe the preparation and properties of ammonia gas.

9. Describe the structure of the eye, and state some of the causes of defective sight.

10. Write what you know of the composition of plants, and state the sources and functions of their more important food constituents.

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

1. Name the different food products obtained from wheat, and describe the process of bread-

making. 2. What is the composition of milk, and what purposes are served by its several constituents when it is used as food?

3. In the selection of a dwellinghouse, what conditions would you endeavour to secure as to its sanitary arrangements?

4. What chemical changes take place in the ordinary constituents of foods in passing through the body?

5. Mention what you consider some of the errors made in dress, giving your reasons for your selection. State the essential features of effective clothing.

6. Describe the process of alcoholic fermentation, and state the physical, chemical, and physiological properties of alcohol.

7. Describe the structure of the heart, and the circulation of the blood.

8. State fully how you would proceed in the preparation and cooking of the following: (a) pea soup, (b) grilled steak, (c) rice pudding; giving reasons for each step in the several processes.

9. How does air become contaminated in an ordinary living-room, and what are then its What are the main points to be attended to in ventilation? chief impurities?

10. State as fully as possible how you would proceed in the management of the sick-room of a person suffering from diphtheria.

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

[Illustrate your answers with diagrams where possible.]

1. Give the outline of a lesson on germination. What experiments would you perform?

2. Name all the cultivated plants you know belonging to the following natural orders: Gramineæ, Leguminosæ, Cruciferæ.

3. Write what you know about humus. How is the fertility of a soil affected by the presence of humus?

4. Give examples showing how bacteria assist in the preparation of plant food in a soil.

5. What experiments would you employ in demonstrating to a class (a) the physical properties of soils, (b) the chemical properties of soils? 6. Contrast the effects produced by nitrate of soda and by sulphate of ammonia when used

as manures. What conditions would determine which of these manures would be the better suited for application as a top dressing to a crop?

7. Contrast the habits of growth of a wheat plant with those of a barley plant.

8. Explain why leguminous crops are but little benefited by the application of nitrogenous manures.

9. Give the outline of a lesson on the effects of drainage on soils, stating what experiments you would use.

10. Write an account of the life history of any grass grub.

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

1. Describe the different parts of a turnip plant during the second year of its growth.

2. Name as many of the organic and of the inorganic constituents of plants as you are acquainted with, and state briefly their properties.

3. How do plants obtain the carbon and the nitrogen required by them as food?

4. Give a classification of soils. How far is the chemical composition of a soil to be accepted as an indication of its fertility? Give reasons for your answer.

5. By what methods is it possible to restore fertility to an exhausted soil?

6. What manures would you employ for the following crops : wheat, peas, mangels?

7. Give examples of catch-crops, and state what advantages are secured by their growth.

8. How would you propagate the following plants: potato, tulip, geranium, pansy, strawberry, raspberry?

9. What is meant by clover-sickness? How would a crop of wheat be affected by being grown on clover-sick land?

10. Give the life history of some form of insect pest.

2-E. 1A.

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

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

1. (a.) Express in simpler words or in phrases the meaning of initiation, austerity, aggravate, allude, graphic, paradox, stamina, evangelical, æsthetic, plenary. Make sentences to illustrate your interpretations.

(b.) Write grammatical notes on the following sentences, explaining anything idiomatic in the use of the italicised words :-

- (1.) What good were it to you
  - If I like others were corrupted?
- (2.) Jean Paul's works require to be studied as well as read, and this with no ordinary patience.
- (3.) How came so glorious a privilege to be awarded to Delos? This the poet takes upon himself to explain.
- (4.) Their design was to turn pirates and plunder the Spaniards, which they could not do without more men.
- (5.) A temperate zone, as Mr. Darwin has pointed out, seems better adapted to the support of large animals.
- (6.) There's not the smallest orb which thou beholds't
- But in his motion like an angel sings.
- (7.) I cannot but surmise the State some danger apprehends.
- (8.) I will feed fat the ancient grudge I bear him.
  (9.) Catherine, with a woman's pride, refused to recognise the tribunal.
- (10.) Part we in friendship from thy land.
- 2. (a.) Point out the faults in the following sentences, and rewrite each sentence correctly:-(1.) By sitting in an upright position their backs are prevented from becoming round, which is injurious to the health.
  - (2.) Brutus and Portia are the beau ideals of husband and wife.
  - (3.) It became the fashion for such great noblemen as the Earl of Leicester to have his own company of players.
  - (4.) Mercutio was disgusted at the way Romeo bore the insult, and challenges Tybalt to fight.
  - (5.) George insisted, as in theory was his right, to distribute places and pensions himself.
  - (6.) The sympathy of the merchants was with the besieged, who they were surreptitionsly supplying with provisions.
  - (7.) Whenever I speak of men born of nature to be writers, if they had not distinguished themselves in some other way (they are mighty few), I always instance you with your remarkable powers of observation and perception. (Dickens to Landseer.)
  - (8.) He made the friendship of John Newton, a man of great eloquence, and who professed the theology of the more Calvinistic section of the Church.
  - (9.) Mr. Perceval Stanley, with his two brothers, are the greatest living authorities on ballooning.
  - (10.) No nation is in the least likely to have the opportunity or to desire to imitate the example of Great Britain.

(b.) Convert the following passage from indirect to direct narration, and explain why the direct form is here preferable :-

"In the letter which Scythrop received from Marionetta she expressed her hope that he would not be angry with her, but always think of her as a friend. She also said that she knew he loved Miss Toobad much better than he did her, and that she wished him much happiness. Mr. Glowry told Scythrop to calm himself as there were yet maidens in England, and he advised him next time to have only one string to his bow. He added that the fatal hour at which Scythrop had vowed to shoot himself was already past. Scythrop replied that the villain Raven must have deceived him in saying that the clock was fast; but, as the appointed time had gone by, he thought there was a chance of his yet making a figure in the world. However, he said he would ring for the rascal Raven and admonish him. When Raven appeared Scythrop looked at him very fiercely two or three minutes, and Raven, still remembering the pistol, stood quaking in mute apprehension till Scythrop, pointing significantly towards the dining-room, told him to bring some Madeira.'

3. Write an essay on any one of the following themes :---

- The spirit of Imperialism.
   Russia and England in Asia.
   Technical training in schools.
- (4.) "Men may rise on stepping-stones
  - Of their dead selves to higher things."

4. Punctuate the following passage, putting capitals where required : -

with that he handed the cup to socrates who took it quite cheerfully from echecrates without trembling and without any change of colour or of feature and looked up at the man with that fixed glance of his and asked what say you to making a libation from this draught may i or not we only prepare as much as we think sufficient socrates he answered i understand said socrates but i suppose that i may and must pray to the gods that my journey hence may be prosperous that is my prayer be it so with these words he put the cup to his lips and drank the poison quite calmly and cheerfully till then most of us had been able to control our grief fairly well but when we saw him drinking and then the poison finished we could do so no longer my tears

came fast in spite of myself and i covered my face and wept for myself it was not for him but at my own misfortune in losing such a friend even before that crito had been unable to restrain his tears and had gone away and apollodorus who had never once ceased weeping the whole time burst into a loud cry and made us one and all break down except only socrates himself what are you doing my friends he exclaimed i sent away the women chiefly in order that they might not offend in this way for i have heard that a man should die in silence so calm yourselves and bear up when we heard that we were ashamed and we ceased from weeping

5. Spell the words dictated by the Supervisor. [Please write the words in a column.]

Spelling (Part of a Paper on English Grammar and Composition).—For Class D. The Supervisor will please read the words aloud once, and then dictate them to the candidates :---

Fallacious, garrulity, heinous, crystalline, garrisoned, preferring, depreciation, discretion, variegated, vedette, vacillation, atoll, transferable, tympanum, tertiary, symptomatic, syndicate, capillaries, encyclical, indictment.

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

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

1. Show, in tabular form, (1) that the grammar of the English language is purely Teutonic, and (2) that the English vocabulary is very composite.

2. What are the chief causes of obscurity in writing English? What grammatical devices are conducive to perspicuity? Illustrate your answer.

3. Mention the various equivalents for the relative pronoun that can be used in writing English, and illustrate the use of these equivalents.

4. Rewrite the following sentences in clear and correct modern English :---

(1.) We have a right to destroy such animals as are mortal.

- (2.) Two sisters want washing.
- (3.) A savage is a better state of life than a slave.
- (4.)Walking along the road, the duke's country seat may be seen in the distance.
- (5.) Mrs. James, presently a residenter at Wellington, shall take in boarders during the winter months, who she hopes to make mutual friends.

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

- A. Circumstances compelled Hester to leave the home (adverbial clause of time to c).
  - B. She had spent the happiest days of her life (adjective clause to A).

c. She was foolish enough to think (principal clause).

- D. She knew Blankshire fairly well (noun clause, object to "to think" in c).

E. She had settled at Warpington (adverbial clause of time to F). F. But she gradually discovered the existence of a large current of society (principal clause, co-ordinate with c).

- G. She knew nothing at all (adjective clause to F).
- H. She was plunged (adjective clause to F, and co-ordinate with G).

I. She was willing or unwilling (adverbial clause of condition to н).

J. She was her brother's sister (adverbial clause of reason to H, and co-ordinate with I). 6. Give the GENERAL analysis of the following passage, and parse IN FULL the words in italics :--

Thou *durst* not thus disparage glorious arms

Which greatest heroes have in battle worn,

Their ornament and safety, had not spells

And black enchantments, some magician's art,

Armed thee or charmed thee strong, which thou from heaven

Feign'dst at thy birth was given thee in thy hair.

7. Write two paragraphs on ONE of the following subjects, attending carefully throughout to expression, punctuation, and neatness of form :-(1.) Australian Federation.

(2.) Life of Lord Roberts.

(3.) The loyalty of the colonies to Great Britain and Queen Victoria.

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

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

what is to be thought of joan of arc what is to be thought of the poor shepherd girl from the hills and forests of lorraine who like the hebrew shepherd boy from the hills and forests of judea rose suddenly out of the quiet out of the safety out of the religious inspiration rooted in deep pastoral solitudes to a station in the van of armies and to the more perilous station at the right hand of kings the hebrew boy inaugurated his patriotic mission by an act by a victorious act such as no man could deny but so did

Sir,---

the girl of lorraine if we read her story as it was read by those that saw her nearest adverse armies bore witness to the boy as no pretender but so they did to the gentle girl

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

[Candidates are requested to number the words, to write them in a column, and to use a separate sheet of paper for the spelling exercise. No marks will be given for any word that contains a doubtful letter. The letter "i" must be douted, and the letter "e" must be looped.]

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

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

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

Rheumatism, facetious, pronunciation, saccharine, homœopathy, synonymous, receipt-book, metonymy, knickerbockers, reciprocal, mounteback, pamphleteer, factious, niece, sanctimonious, riveting, indigenous, exotic, saunter, paralytic.

English (Paper I., Composition and Précis).—For Senior Civil Service. Time allowed : 3 hours. 1. Point out the faults in the following sentences, and rewrite each sentence correctly:-

- (1.) It will be a long struggle, which has and will bring sorrow and distress to many homes.
  - (2.) Although the present war with the Transvaal Republic should not be compared with the great Napoleonic war in respect to greatness, yet just as great disaster awaits the English nation in case of defeat.
  - (3.) There seems to always be so many surprises in the studying of the different characters we see, these surprises always giving us something to fathom out.
  - (4.) It is scarcely creditable that a man who was always drunk could have written as Steele did.
  - (5.) Marlborough could see a sparrow fall with as much equanimity as he would send his best friend to destruction.
  - (6.) He enlivens whoever he is with.
- (7.) She was capricious and had a violent temper, both of which Byron inherited from her.
- (8.) It has been proved that the germs do not attack the body from outside, but to originate within the body itself.
- (9.) These caves resemble the famous Jenolan Caves, but which, like other local wonders, have not received the attention they deserve.
- (10.) The English have extreme difficulty to run away (Emerson).

2. State, with examples, the chief rules to be observed in punctuation.

- 3. Write an essay on any one of the following subjects :

  - (a.) The French Revolution and English poetry; or,
    (b.) The sources of literary inspiration for the period 1800-1850; or,

(c.) Women writers in early nineteenth century literature.

- 4. Make an abstract of the following correspondence.
- 5. Draw up a précis of the same correspondence.

#### No. 1.

The General Manager for the Colonies, New Zealand Shipping Company, Christchurch, to the Postmaster-General, Wellington.

Christchurch, 14th December, 1898.

I have the honour to respectfully ask your assistance in obtaining the permission of the Commissioner of Customs of the Wellington Harbour Board to work the Canadian-Australian Royal Mail Company's steamers on Sunday when necessary. Under the present time-table, should a steamer be more than twelve hours late from Vancouver she would be detained at Wellington some thirty hours before starting work, in consequence of the regulation prohibiting working on Sunday. This is a very serious delay for a mail steamer, and, while it may not affect the delivery of mails for New Zealand, it is most disadvantageous for the Colony of New South Wales. Every effort is being made to run the Canadian-Australian Company's steamers up to time-table dates, and it is not anticipated that we shall require to avail ourselves of the permission to work on Sunday if granted, except in the case of detention of steamer at Vancouver for mails, or of some unavoidable delay on the passage to Wellington. We trust you will see your way to lend your powerful assistance in the direction indicated above.

I have, &c.,

ISAAC GIBBS, General Manager.

#### No. 2.

The Secretary, General Post Office, Wellington, to the Chairman, Wellington Harbour Board. General Post Office, Wellington, 31st December, 1898. SIR,-

I am directed to forward you copy of a letter from the general manager of the New Zealand Shipping Company, drawing attention to the serious delays to the Vancouver mail steamers whenever they arrive here on Sundays, because of the Board's regulation prohibiting the discharging of vessels on Sundays. I have to point out that the delays in question prevented the Vancouver steamers reaching Sydney before Friday or Saturday, which, from the fact that the outward San Francisco mail leaves Sydney the following Monday, is a matter of considerable moment to the business people of New South Wales, as the detention here minimises the interval for replies. It is observed that your Board has already had the matter under consideration, and agreed that the steamers should be allowed to discharge into a hulk moored in the stream. The manager here for the New Zealand Shipping Company points out, however, that, apart from the inconvenience of the proposal, there is no hulk here suitable for the purpose, and that it would be undesirable to transfer perishable cargo, such as fruit, to a hulk used as a collier. Under the circumstances, the Postmaster-General would be glad if the Board could see its way to reconsider the matter, so as to allow the landing of cargo at one or other of the wharves, and otherwise facilitate the discharging and departure of the Vancouver steamers arriving here on Sunday.

I have, &c., W. GRAY.

#### No. 3.

The Secretary, Wellington Harbour Board, to the Secretary, General Post Office, Wellington. Wellington, 6th January, 1899. Sir,-

I have to acknowledge your letter of the 31st ultimo, addressed to the Chairman of the Wellington Harbour Board, drawing attention to serious delays to the Vancouver mail steamers when they arrive here on Sundays, because of an alleged regulation of the Board prohibiting the discharge of vessels on Sundays. I shall have pleasure in placing the matter before the Board at You are in error in thinking that the primary obstacle to the working of cargo on its next meeting. Sundays lies with the regulation of the Board. It is true that the Board have a by-law fixing the hours of business (which excludes Sundays), but they have not yet had under consideration the advisableness of altering this regulation with a view to enable a mail steamer to work cargo on Sundays, because they are advised that such action would be illegal, and that until the law of the colony is altered to enable Sunday work to be carried out they are unable to authorise work to be executed on that day. The Board are advised that Sunday work is prohibited under the provision of "The Police Offences Act, 1884," clause 16 of which provides a penalty for working on Sundays. When the New Zealand Shipping Company approached the Board recently on this subject, asking that they might be permitted to work cargo on Sundays out of vessels arriving from Vancouver, the Board decided that a reply should be sent to them, stating that Sunday work on the wharves was an offence under "The Police Offences Act, 1884," and to point out to them that the cargo could be landed into a lighter or hulk. I think that the difficulty raised by the local manager of the New Zealand Shipping Company—that there is no hulk here suitable for the purpose—is scarcely so solid an argument as I should have expected. Even admitting that it is undesirable to transfer perishable goods to coal-hulks, there at present is in the harbour the hulk "Rowena," specially fitted for the handling of cargo, and also the store-ships "Arawata" and "William Manson," which could be fitted at a small cost.

Trusting that you may be able to point out to the Board that they are exempt from the pro-vision of the Police Offences Act, and that they have a discretion in dealing with the matter, when I can assure you that your suggestions will meet with every careful consideration from the Board. I am, &c.,

WM. FERGUSON, Secretary.

#### No. 4.

The Secretary, Wellington Harbour Board, to the Secretary, General Post Office, Wellington. Wellington, 30th January. 1899. SIR.-

I have to acknowledge yours of the 11th January on the subject of the working of cargo from the Vancouver mail steamers on Sundays. The whole of the correspondence was considered by the Board very carefully at its meeting on Thursday last, when a decision was arrived at that they would adhere to their previous conclusion, as contained in the reply already sent to the New Zealand Shipping Company, to the effect that they were advised that working on the wharf on Sunday is illegal under the Police Offences Act, and that they are therefore powerless in the matter. I may, however, inform you that the feeling of the members of the Board was practically unanimous against any Sunday work in connection with the Vancouver mail service, or in any other respect, except that which is an absolute work of necessity, and that the impression left on my mind is that, even if the Government in the ensuing session of Parliament modifies the Police Offences Act so as to legalise Sunday work, the Board would be unwilling to modify their by-laws. It is, however, quite competent for the Government to pass a Bill making it compulsory upon the Board to receive cargo on Sunday if they deem that course to be desirable.

I have, &c., WM. FERGUSON, Secretary.

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

1. Write notes explaining the following :---

(1.) Baphometic fire-baptism.

(2.) "True pineal gland of the Body Social. a purse."

(3.) Cogito ergo sum.

- (4.) Forth issuing from Cimmerian night.
- (5.) Like hibernating animals safe lodged in some Salamanca university or Sybaris city or otherwise superstitious or voluptuous Castle of Indolence.
- (6.) That Leicester shoe shop was a holier place than any Vatican or Loretto Shrine.
- (7.) Instead of an Ecce Homo they had only some choice of Hercules.
- (8.) Sartor Resartus (the title). (9.) Inexhaustible as the hoard of King Nibelung.
- (10.) The far region of Poetic Creation and Palingenesia where that Phœnix Death-Birth of Human Society is seen to be inevitable.

2. Discuss Carlyle's teachings on the following subjects : Education, War, Rank and Society, Happiness and Duty.

3. Write in clear and simple prose style a version of the following passage from Samson Agonistes :-

"Thou art become (O worst imprisonment!)

The dungeon of thyself; thy soul

(Which men enjoying sight oft without cause complain),

Ìmprison'd now indeed,

In real darkness of the body dwells,

Shut up from outward light

To incorporate with gloomy night;

For inward light, alas !

Puts forth no visual beam.

O mirror of our fickle state,

Since man on earth, unparalleled!

The rarer thy example stands,

By how much from the top of wondrous glory, Strongest of mortal men,

To lowest pitch of abject fortune thou art fallen. For him I reckon not in high estate

Whom long descent of birth,

Or the sphere of fortune, raises;

But thee, whose strength, while virtue was her mate,

Might have subdued the earth,

Universally crowned with highest praises."

Write what you know of any five of the following literary creations: Becky Sharp, Dotheboys Hall, Frankenstein, Jeanie Deans, Bailie Nicol Jarvie, Rochester, Sandy Mackaye, the Jackdaw of Rheims, Sidonia, Nydia, Haidee, Mildred Tresham.

5. (a.) Give an account of English lyrical poetry of the period 1800–1850. Quote any famous specimens you remember; or,

(b.) Name the authors of the following passages, and the works in which they occur, and write what you know of the context :-

- (1.) Alas! they had been friends in youth: But whispering tongues can poison truth; And constancy lives in realms above ; And life is thorny; and youth is vain; And to be wroth with one we love Doth work like madness in the brain.
- (2.) True love in this differs from gold and clay,
- That to divide is not to take away.
- (3.) A thing of beauty is a joy for ever. (4.) God 's in His heaven-
  - All 's right with the world !
- (5.) Say not the struggle nought availeth, The labour and the wounds are vain, The enemy fainteth not, nor faileth, And as things have been they remain.
- (6.) Whose dwelling is the light of setting suns, And the round ocean and the living air,
- And the blue sky and in the mind of man. (7.) One that would peep and botanize
- Upon his mother's grave.
- (8.) Tears from the depth of some divine despair.
- (9.) I strove with none, for none was worth my strife; Nature I loved, and, next to Nature, Art; I warmed both hands before the fire of life; It sinks, and I am ready to depart.

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

[Note.-The full working of the questions, and not merely the results, must in all cases be given.]

1. The daily issue of a newspaper is 60,000 copies. Three days of the week the paper consists of three sheets, and the other three days of four sheets. If a sheet be 3 ft. long and 2 ft. broad, find the number of acres which the weekly issue would cover.

2. Simplify  $\frac{1}{7} - \frac{1}{9} - \frac{1}{11} + \frac{1}{13}$ , and multiply the result by the sum of  $\frac{17}{64}$  and  $\frac{9}{25}$ . 3. The assets of a bankrupt amount to £5,000. It is estimated that the creditors will receive 5s. in the pound; but it is discovered that one debt has been overlooked, and this reduces the dividend to 4s. 6d.: what is the amount of the debt that was overlooked?

4. A corn merchant bought 121 quarters of wheat, and sold it so as to gain  $17\frac{1}{2}$ % on 26 quarters and 13% on the rest, having previously tried to sell the whole at a uniform gain of 15%, which would have brought him £4 5s. more than he actually received : what did the wheat cost him a quarter?

5. Give rules for the division of decimals, and for reducing a mixed circulator to a vulgar fraction. Divide 0.1001 by 0.390625.

6. If an ounce of gold be worth  $\pounds 4.0099$ , what is the value of a bar of gold weighing 1.683 lb.?

7. If the true discount on £226 2s. 8d. due at the end of a year and a half be £12 16s., what is the rate of interest?

8. A man, being two minutes late for his train, determined after half a minute's consideration to take a special train, which was got ready in twenty minutes. If the ordinary train travelled thirty-two miles an hour, and the special forty-eight miles, how far would the ordinary train have gone before it was overtaken by the special?

9. When the 3-per-cents are at 80, how much stock must be sold out to pay a bill of £690 3s. 9d. due nine months hence, at 3% per annum, simple interest?

10. A man bought, at 57s. a quarter, a crop of standing wheat estimated to yield 100 quarters. The yield proved deficient; but he sold the wheat at 72s. a quarter, and thereby cleared 2% on his outlay: how many quarters did the crop yield?

11. Of a debt of £1,000, £190 is due now, £250 in one month, £370 in five months, £120 in eight months and a half, and the balance in nine months: when would be the proper time of payment if the whole debt were paid together?

12. What will it cost to line with lead, at 10s.  $1\frac{1}{2}d$ . a square yard, a closed cistern, of which the internal measurements are—length, 7 ft. 10 in.; width, 5 ft. 4 in.; and depth, 3 ft. 6 in.?

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

NOTE 1.—One gallon = 0.1605 cubic feet. The length of the circumference of a circle =  $3.1416 \times \text{diameter}$  of the circle. The area of a circle =  $3.1416 \times \text{square}$  of its radius. Note 2.—The whole of the working of each question to be shown.

1. Find, correct to five places of decimals, the sum of the following, converting each term into a decimal before performing the addition :---

4 6 8 10

 $\frac{1}{2\times3} + \frac{1}{2\times3\times4\times5} + \frac{1}{2\times3\times4\times5\times6\times7} + \frac{1}{2\times3\times4\times5\times6\times7\times8\times9} + \frac{1}{2\times3\times4\times5\times6\times7\times8\times9\times10\times11}$ 2. A train moving uniformly travels 88 yards in three seconds: find its velocity in miles an hour.

In what time will it travel 600 miles, with a stoppage of five minutes after every hundred miles?

3. The minute-hand of a clock is 7 in. long : find the velocity of its extremity in feet a second.

4. What length of carpet 30 in. wide will be required for a room 17 ft. 4 in. long and 13 ft. 9 in. wide? Draw a diagram to show how you would arrange the carpet to fit into the room. If the cost of the carpet is £10 18s. 4d., what is the price of it a yard? No regard need be paid to the pattern of the carpet.

5. Give a rule for the decimalization of sterling money, and find the cost, correct to a penny, of 1086 42 acres at £11 18s.  $9\frac{1}{2}d$ . an acre.

6. A box made of white pine  $\frac{3}{4}$  in. thick is 4 ft. long, 3 ft. wide, and 3 ft. deep externally.

Find the weight in pounds of the box, including the lid, if a cubic foot of white pine weighs 25 lb. 7. A cylindrical tank is 8 ft. in diameter and 4 ft. high. Find (1) the area of the iron required to make it, including the top and bottom, and find (2) the number of gallons of water the tank will hold.

8. What sum at compound interest will amount to £1,300 at the end of the first year and  $\pounds$ 1,352 at the end of the second year?

9. If the rate of insurance is  $3\frac{1}{2}$  per cent., what premium must I pay on a ship worth £21,413 in order that, in case of loss, I may recover both the value of the ship and the premium paid? 10. What are present value, true discount, commercial discount? Find the difference between

the commercial discount and the true discount on £8,550 for eight months at 5 per cent.

11. A person derives an income from  $\pounds 6,720$  invested in the 4 per cents at 96. He sells out at 94, and invests one half of the proceeds in railway stock at  $82\frac{1}{4}$ , which pays a 3 per cent. dividend, and the other half in bank stock at  $164\frac{1}{2}$ , which pays an  $8\frac{1}{2}$  per cent. dividend. What difference will he find in his income?

12. An empty cistern has three pipes A, B, and C opening into it. A can fill it in three hours, B can fill it in four hours, and C can empty it in one hour. A is opened at 1 p.m., B is opened at 2 p.m., and C is opened at 3 p.m. At what time will the cistern be empty?

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

NOTE.-The full working of the questions, and not merely the results, must in all cases be given.

1. Divide 289145 by 252 by factors; and explain the method by which you obtain the remainder.

2. Simplify (a.) 
$$\frac{3\frac{5}{7} \div 2\frac{1}{1}}{5}$$
 of  $(11\frac{3}{4} - 2\frac{1}{5})$   $\div \frac{3\frac{3}{5}}{5\frac{1}{16} + \frac{1}{2}}$  of  $\frac{4\frac{3}{5}}{4\frac{3}{5}}$   
(b.)  $\frac{1}{2}$  of  $\frac{3}{4}$  of  $\frac{2}{3} + \frac{3}{4} + \frac{2}{15} - \frac{5}{12} + \frac{1}{3} - \frac{23}{50} + \frac{1}{2 + \frac{1}{32}}$ 

3. Show that 0.318 differs less from 0.317875 than 0.317 does; and find the least actual error that need be made, if we retain only three places of decimals, in finding the value of 0.317875 of £100.

4. Find the value of 3.345 of £4 11s. 8d. + 2.0136 of £2 1s. 3d. + 0.714285 of 10s. 6d.

5. How many revolutions will be made by a wheel turning at the rate of 360 revolutions in 7 minutes, while another turning at the rate of 470 in 8 minutes makes 658 revolutions?

6. Explain the difference between banker's discount and true discount; and find it on a bill for £1,550 due 8 months hence at 5 per cent.

7. A and B between them contract to perform a certain amount of work for £1,245. A employs on it 180 children for 3 months, 80 women for 2 months, and 40 men for 1 month; B employs 120 children for 2 months, 60 women for  $1\frac{1}{2}$  months, and 80 men for  $2\frac{1}{2}$  months: how much should each of the two (A and B) receive? (A woman does twice as much work as a child, and a man does three times as much as a child.)

8. A man has stock in the 3-per-cents which produces him an income of £300 a year. He sells out half of it at 92, and invests the proceeds in railway stock of which a fifty pound share is worth £23: what dividend per cent. per annum ought the railway stock to pay so that his total income may be increased by £50?

9. A sells goods to B at a loss of 4 per cent., B sells them to C at a loss of  $6\frac{1}{4}$  per cent., C sells them to D for £24 8s. 3d., gaining thereby  $8\frac{1}{2}$  per cent. : what was the original cost? 10. When hay was fetching £5 a ton, a farmer hid himself in a load, and his weight was

added to that of the hay. Before the hay was shipped the error was detected, and, after another weighing, 7s. 6d. was deducted from the price: find the weight of the farmer. 11. Explain the meaning of the term "par of exchange." If an American dollar at par be

worth 4s. 6d., what is the value of 642 dollars when the exchange is 7 per cent. in favour of England?

12. A can do  $2\frac{1}{2}$  and B  $1\frac{1}{3}$  times as much work in a day as C. A and C are employed together for 10 days on a piece of work which they would finish in another 12 days; but, after the tenth day, A is taken off, and B put on : when will the work be finished?

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

1. What is the cause of the phenomenon of the "midnight sun" in the polar regions? Why are the summer days longer at Invercargill than at Auckland?

2. Name the principal types of man, and give the most important races belonging to each type.

3. Explain very briefly the following terms: tropic, monsoon, geyser, atoll, metamorphic rock, tundra, hoar-frost, waterspout, tidal wave, Gulf Stream.

4. Mention the principal mountain ranges of Europe, omitting those which have no historical What countries or districts do the following passes connect: Mont Cenis, St. imvortance. Gothard, the Iron Gate, Killiecrankie, the Brenner.

5. Draw a sketch-map of South America, showing the course of the Orinoco, the Amazon, and the La Plata. Mark the position of Peru, Chili, Venezuela, British Guiana.

6. Write a brief note on each of the following places: Madras, Rangoon, Allahabad, Peshawur, Cabul, Tientsin, Oporto, Shanghai, Liverpool, Minneapolis.

7. Where are the principal coal measures of the world? Which of them are being extensively worked, and what towns have risen to importance through their proximity to coalfields? Name also the principal deposits of mineral oil. 8. What is the cause of the north-west winds of Canterbury? Compare them with hot winds

that prevail in Europe.

9. From what countries are the following articles chiefly derived : tobacco, opium, rice, tapioca, tea, jute, quicksilver, copper, shoe leather, cocoa.

10. The exports of New Zealand amount this year to about £13,000,000 in value. What items contribute principally to this total? Give roughly their respective values.

11. Name all the towns of the world which possess a million or more inhabitants.

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

1. Explain the terms atoll, doldrums, ecliptic, fiord, ice-floe, pampas, roadstead, selvas, simoom, typhoon.

2. What are the causes of ocean currents? Enumerate and describe the chief ocean currents, and discuss their effect upon the climate of the countries whose shores they wash.

3. Give as full an account as you can of the causes and phenomena of the tides.

4. What do you mean by a *continental* drainage system? Mention and describe the chief continental drainage systems of the world.

5. What is a volcano? Mention other manifestations of volcanic energy. State what you know of the chief regions of volcanic energy throughout the world.
6. Compare the mountain systems of Asia and Africa, giving a full account of each.

7. What is the distribution of the following religions: Protestant, Roman Catholic, Mohammedan, Buddhist?

8. From what countries are the following commodities chiefly obtained : Coal, coffee, cotton, diamonds, gold, hides, iron, tobacco, wheat, wool?

9. What do you know of Atbara, Baku, Beira, Bourke, Cronstadt, Djiboutil, Galveston, La Guayra, Cape Nome, Tien-tsin?

10. Draw a map of Asia, inserting as much detail as you can.

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

1. What part was taken in the conversion and religious settlement of Britain by the following: Columba, Aidan, Cuthbert, Chad, Augustine, Theodore of Tarsus.

2. By what means did William the Conqueror control (1) the barons, (2) the clergy? What

was his policy towards the Jews? 3. What steps did Edward I. take to bring Scotland into closer connection with the English Crown? What reforms did he introduce into the administration of justice? What was the object of the Statute of Mortmain?

4. What corresponded in early English history (before 1400 A.D.) to the following? Parlia-ment, Justices of the Peace, County Councils, Town Councils, the Supreme Court, the Appeal Court, the Mayor, the Sheriff, the Grand Jury, the Petty Jury, the Militia. 5. Explain how Charles II. gradually freed himself from parliamentary control. Name the members of "the Cabal," and describe as well as you can the political plans and actions of Shaftes-

bury.

6. What wars was England engaged in between 1688 and 1775? Give dates.7. Who were the principal writers of George III.'s reign? Name the authors of the Dunciad, the Spectator, Absolom and Achilophel, the Novum Organum, the Christian Year, Childe Harold, Utopia, Samson Agonistes, the Tempest, the Rape of the Lock, Christabel, the Decline and Fall of the Roman Empire.

8. Who were the following (the answers need not exceed two lines for each): Thomas Crom-well, Henry Cromwell, Sir John Oldeastle, Patrick Sarsfield, Daniel O'Connell, George Villiers, Dr. Priestley, Daniel Defoe.

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

1. Describe William the Conqueror's rule of England. What were the results of the Norman conquest of England?

2. Give an account of the Reformation.

3. Give brief accounts of any attempts made by James II. or his descendants to win back the throne of England.

Describe the career and policy of Sir Robert Walpole.
 Trace the growth of English power in India.

6. Narrate fully the circumstances that led to the secession of the American colonies.

Name the opposing parties in the following battles; give the date of each battle and the result : Agincourt, Blenheim, Culloden, Corunna, Waterloo.
 8. Write brief notes on the following : Huskisson, Sacheverell, Montfort, Stamp Act, O'Connell, Magna Charta, Wilkes, Gordon Riots, Wood's half-pence, Sunderland.

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

[Candidates are not expected to attempt more than six questions.]

1. Describe the foreign policy of England as shaped by William III. Give a brief history of the war of the Spanish Succession, and remark upon its chief results as far as England was concerned.

2. State clearly the causes that led up to the war of American Independence, and sketch the course of the war.

3. What constitutional questions are illustrated by the career of John Wilkes?

4. Sketch briefly the main events of the Peninsular war, and show exactly how it contributed

to the downfall of Napoleon. 5. Describe the measures which preceded and led up to the emancipation of the Catholics in 1829

6. Trace in brief the colonial expansion of England within the period 1688–1837.7. What influence upon the development of British civilisation was exercised by Charles James Fox, Adam Smith, Sir Richard Arkwright, Sir Humphry Davy, Josiah Wedgwood, James Watt?

3-E. 1A.

Latin.—For Class D, and for Senior and Junior Civil Service. Time allowed: 3 hours. 1. Translate freely into good English the following passages :-

#### (a.) A Fierce Fight.

Rejectis pilis cominus gladiis pugnatum est. At Germani celeriter, ex consuetudine sua, phalange facta, impetus gladiorum exceperunt. Reperti sunt complures nostri milites, qui in phalangas insilirent, et scuta manibus revellerent, et desuper vulnerarent. Quum hostium acies a sinistro cornu pulsa atque in fugam conversa esset, a dextro cornu vehementer multitudine suorum nostram aciem premebant. Id quum animadvertisset Publius Crassus adolescens qui equitatui praeerat, quod expeditior erat quam hi qui inter aciem versabantur, tertiam aciem laborantibus nostris subsidio misit. Ita proelium restitutum est.

#### (b.) The True Statesmanship.

Omnino, qui reipublicae praefuturi sunt, duo Platonis praecepta teneant : unum, ut utilitatem civium sic tueantur, ut quaecumque agunt, ad eam referant, obliti commodorum suorum : alterum, ut totum corpus reipublicae curent, ne, dum partem aliquam tuentur, reliquas deserant. Ut enim tutela, sic procuratio reipublicae ad utilitatem eorum, qui commissi sunt, non ad eorum, quibus commissa est, gerenda est. Qui autem parti civium consulunt, partem negligunt, rem perniciosissimam in civitatem inducunt, seditionem atque discordiam : ex quo evenit, ut alii populares, alii studiosi optimi cujusque videantur, pauci universorum. Hinc apud Athenienses magnae discordiae, in nostra republica non solum seditiones, sed pestifera etiam bella civilia : quae gravis et fortis civis et in republica dignus principatu fugiet atque oderit, tradetque se totum reipublicae, neque opes aut potentiam consectabitur, totamque eam sic tuebitur, ut omnibus consulat.

2. Parse fully the following words, and explain the construction: pilis, insilirent, subsidio, in (a); commodorum, parti, principatu, in (b).

3. Give in tabular form the terminations, both singular and plural, of nouns of the first three declensions, and decline fully vir, vis, genus, genus, genu, quis (indefinite).
4. State fully the different constructions by which purpose, cause, and condition may be

expressed in Latin, distinguishing in the last case between probable and improbable condition.

5. Distinguish the meanings of aliquis, quisquam, quisque; occido, occido; paro, pareo, pario; servo, servio; quæro, queror; and give the perfects and supines of all the verbs included in the question.

6. Explain clearly, with examples, the use of the gerundive participle in Latin.

7. Translate into Latin :-

(a.) The enemy pitched their camp on the top of the hill.

- (b.) He lived five years at Rome.
- (c.) Leaving Spain on the first of January, he reached the city on the twenty-second of March.

(d.) If he asks you where you are going, do not answer him.(e.) "That oath," said Hannibal, "which I gave to my father in my boyhood I have so kept up to the present time that no one ought to doubt my being of the same mind for the future."

French.—For Class D, and for Senior and Junior Civil Service. Time allowed : 3 hours. 1. Translate into English :-

Comme il ne faisait guère que trente-quatre degrés centigrades au-dessus de zéro, je suis entré me réchauffer un peu, avec deux amis, au palais des armées de terre et de mer, où, grâce à la foule, on prenait un bain de vapeur humaine tout à fait réconfortant.

J'avais oui dire qu'il y avait là une exposition rétrospective fort intéressante. Aussi, avonsnous été droit aux salles qui lui sont consacrées. Nous avons d'abord vu nombre de casques, nous ete dioir aux sanes qui fui sont consacrees. Nous avois d'abold vi homore de casques, cuirasses, boucliers, hérissés d'une pointe aiguë, épées, masses d'armes, les plus magnifiquement décorés qu'on puisse rêver. On en voit de tous côtés, à l'Exposition : au petit Palais, au Pavillon espagnol,—où il y en a d'admirables, etc., etc. On dirait que les panoplies vides de la terrible salle d'Eviradmus se sont donné rendez-vous entre le Champ de Mars et le Trocadéro. Puis viennent les souvenirs des temps de Henri IV. et des quatre Louis. Ceux de la monarchie

du dix-huitième siècle sont particulièrement abondants. On voit figurer là, notamment, les portraits et les souvenirs de quelques maréchaux qui ont peut-être plutôt été des hommes de cœur que des hommes de guerre. Mais qu'importe? Tout ce qui fait revivre un petit coin du passé est intéressant.

Puis nous passons au Consulat et à l'Empire. Là, les souvenirs sont plus abondants encore. Armes, costumes, portraits, tableaux de bataille, reliques de toutes sortes. Quelques curiosités fleurdelysées arrêtent assez singulièrement la Restauration à la période que remplit le grand nom de Napoléon: comme pour vous rappeler combien de courtisans du César corse ont été les courtisans de Louis XVIII.

2. Translate into French :-

The life of Agrippa d'Aubigné was an uninterrupted series of labours, both in the council and on the battlefield, on behalf of the Protestant cause. Gifted with great energy, personal courage, and a thorough hatred of anything like hypocrisy, he remained ever inaccessible to the corruption and machiavelism which formed the leading features of the Valois court. D'Aubigné's memoirs are most valuable for the details they give on the religious wars of the sixteenth century; but his other works, although not professedly historical (except the Universal History), are equally curious when viewed in that light.

For energy, vigour, and raciness of style the *Iambes* of our contemporary satirist, Mr. Auguste Barbier, deserve to be compared with d'Aubigné's *Tragiques*.

3. Translate also :-Do you like fish, sir?

That depends; what fish have you?

A splendid turbot, caught this morning.

I prefer soles.

We have some; do you like them fried?

Yes. Bring me at the same time some oil, vinegar, pepper, salt, and a slice of lemon. When shall you be ready?

In two or three minutes.

May I have this?

Certainly ; take it. And now, where are you going?

4. Conjugate in full the verbs falloir, pleuvoir, neiger.

5. Give the French for-

It is early yet.

To the knowledge of everybody.

Here we are.

So much the worse.

At random.

On the way

At first sight.

Three times thirteen are thirty-nine. Half your cake.

William the Third.

6. Give the plural form of—

C'est nous.

Est-ce lui ?

Au fond de la mer.

Ne cours pas si vîte.

Ce tableau coûte fort cher.

Oû vas-tu ?

Je suis ici en camp-volant.

7. Explain fully the rules of concord of each past participle in the following sentences :----Nous n'avons pas encore reçu les objets que vous nous avez envoyés.

Ils se sont écrit plusieurs fois et ils se sont réconciliés.

Elles ont ri et puis elles sont parties.

Ils s'étaient proposé d'aller au concert.

Malgré les accidents qu'il y a eu.

8. Form French verbs from these adjectives: bas, court, frais, haut, large, rouge, moindre, beau, faux, and dur.

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

10. Which one single French word is equivalent to each of the following : à l'avenir, bien que, à la maison de, faire voir, de bonne heure, plus mauvais, jour précédent, jour suivant, de qui, pas beaucoup.

German.—For Class D, and for Senior and Junior Civil Service. Time allowed : 3 hours. 1. Translate into English :--

Vier Soldaten waren desertirt. Sie wurden gefangen und von dem Kriegsgericht zum Tod rteilt. Der Kaiser änderte die Strafe dahin, dass nur einer gehängt werden solle. Die verurteilt. Soldaten wurden auf den Hinrichtungsplatz geführt. Dort befahl man ihnen zu würfeln, damit der, der am wenigsten werfe, gehängt werde. Drei davon thaten dies, aber der vierte weigerte sich zu würfeln, weil der Kaiser jedes hasardspiel verboten habe.

Da er nicht zum Würfeln zu bewegen war, befragte man der Kaiser ; der die Geistesgegenwart des Unglücklichen so bewunderte, dass er alle vier begnadigte.

2. Translate also :-

Was für Wetter ist es heute? An wen schrieben Sie? Sahen Sie das neue Stück gestern? Ist es sehr weit von hier? Erwarten Sie jemand? Nehmen Sie Ihren Hut ab. Die Uhr schlägt. Es regnete den ganzen Tag. Setzen Sie Ihre Kappe auf.

3. Give the comparative and superlative of gut, viel, oben, gross, hoch, nah, hinter, fromm, kurz, arm.

4. Form the genitive singular and the nominative plural of the following nouns, and mention those which have two different plurals : Acker, Geld, Gemälde, Gesicht, Hund, Kind, Kunst, Leben, Pferd, Wärter, Wonne, Wort.

5. Conjugate in the imperfect indicative the verbs fliegen, gehen, laufen, and singen.

6. Translate into German :---

Why do you come alone?

My friend is very busy; it will be an hour before he can come.

It is better late than never.

On what floor does he live?

On the fourth, and the steps are very steep.

Changeable weather is better than continual rain. Unlock your trunk, I say.

Your room was not locked.

7. What are the principal auxiliary verbs, and how are they used?8. With regard to each of the following compound verbs, say whether the prefix is separable or inseparable: anerkennen, auferstehen, durchreisen, missbrauchen, misshandeln, missrechnen, and umdrehen ? Give the meaning in each case?

9. Give the German for the following prepositions: above, about, by, at, to, from, with. State what case or cases each word governs, and give examples?

10. When is the subjunctive mood employed in German?

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

1. Explain in full the meaning of the expression  $\frac{5a^2+3bc-2ac}{c}$ , and find its numerical value  $\sqrt{4a^2+2b^2+3}$ 

when a = 5, b = 3, c = 1.

2. Add together  $\{(p-q)a - (q-r)b\} - \{(p+q)a + (q+r)b\}$  and pa + rb + q(a+b)Multiply  $3x^{n-3} + x^{n-2} - 2x^{n-1} - 4x^n$  by  $2x^{n-3} + 3x^{n-4}$ 

3. Divide  $x^{8} + x^{6}y^{2} + x^{4}y^{4} + x^{2}y^{6} + y^{8}$  by  $x^{4} + x^{5}y + x^{2}y^{2} + xy^{8} + y^{4}$ and  $x^{5} - (1+m)x^{4} + (1+m+n)x^{8} - (m+n+p)x^{2} + (n+p)x - p$  by  $x^{2} - x + 1$ 4. Find the factors of  $x^{4} - 3x^{2} - 4$ ;  $x^{8} + x^{4} + 1$ ;  $a^{8} - b^{8} - a^{2}b + ab^{2}$ 

5. Simplify-

$$\frac{1 - \frac{a^2}{(x+a)^2}}{(x+a)(x-a)} \div \frac{x(x+2a)}{(x^2 - a^2)(x+a)}$$

and  $\frac{3}{4x^4-8x^2+4} - \left\{\frac{1-x}{4-4x^2} - \left(\frac{1}{8+8x} - \frac{8}{8x-8}\right)\right\}$ 6. If u = y + z - x, v = z + x - y, w = x + y - z, find in terms of x, y, and z the value of

 $u^{s}+v^{s}+w^{s}-3uvw$ , and prove that x+y+z is a factor of the result.

Find the relation between a, b, and c if  $x^2 - ax + b^2$  is exactly divisible by x - c

7. Solve the equations :-

$$\frac{3-2x}{1-2x} - \frac{2x-5}{2x-7} = 1 - \frac{4x^2-2}{7-16x+4x^2}$$
$$\frac{1}{x-13} - \frac{2}{x-15} + \frac{2}{x-18} = \frac{1}{x-19}$$
$$a = b - b - c - c - c$$

8. Solve the equations :--

$$\begin{cases} \frac{a-b}{x-1} + \frac{b-c}{x-2} + \frac{c-a}{x-3} = 0\\ \begin{cases} \frac{3x+y}{9} - \frac{5y-2x}{7} = \frac{3y+1}{14}\\ (x+20)^3 - (x+y)(x-y) = (y+22)^2 \end{cases}$$

9. I walk for  $2\frac{1}{2}$  hours at my usual pace, and then for  $1\frac{1}{4}$  hours at half a mile an hour slower

than that pace: if the total distance travelled be  $12\frac{1}{2}$  miles, find my usual pace. 10. A and B run two races, each of 400 yards. In the first A gives B a start of 20 seconds, and wins by 50 yards; in the second A gives B a start of 125 yards, and wins by 5 seconds. Find the speed of each runner.

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

1. If  $a = \frac{3}{4}$ , b = 1,  $c = 1\frac{1}{4}$ , and  $s = \frac{1}{2}(a+b+c)$ , find the value of  $\frac{(s-a)(s-b)}{s(s-c)}$ ; and show that  $(s-b)^3 + (s-c)^3 = a^3 - 3a(s-b)(s-c)$ 

2. Divide  $a^2 - a^{\frac{4}{3}}b^{\frac{2}{3}} - a^{\frac{2}{3}}b^{\frac{4}{3}} + b^2$  by  $a^2 - a^{\frac{2}{3}}b^{\frac{1}{3}} - a^{\frac{1}{3}}b^{\frac{2}{3}} + b^2$ , and verify the result by resolving dividend and divisor into their ultimate factors.

What is the condition requisite that  $x^3 + ax^2 + bx + c$  may be divisible by x - n?

3. Expand  $(a^2 - 2x^2)^4$ ; and write down the coefficient of  $x^n$  in the square of  $1 - x + x^2 - x^3 + \dots$ 4. Resolve the following expressions into factors, and write down their L.C.M.:  $(ax^2-4a)^2$ ,  $a^2x^2-5a^2x+6a^2$ ,  $ax^2-ax-6a$ 

Also, find the highest common factor of- $2x^3 + 5x^2 + 9x + 9$  and  $3x^3 + 4x^2 + 10x + 3$ 

5. Simplify the expressions-

(a.) 
$$\left\{1 - \frac{2x^2}{a^2} + \frac{2x^4}{a^2(a^2 + x^2)}\right\} \left\{\frac{2a^4}{x^2(a^2 - x^2)} - \frac{2a^2}{x^2} - 1\right\}$$
  
(b.)  $\frac{y^2}{x(x^2 - y^2)(x^2 - z^2)} + \frac{x^2}{y(y^2 - x^2)(y^2 - z^2)} + \frac{xy}{z(z^2 - x^2)(z^2 - y^2)}$ 

6. Extract to five terms the square root of  $a^2 - \frac{1}{2}ab$ .

7. Solve the following equations :-

(a.) 
$$\frac{b}{x-a} + \frac{a}{x-b} = \frac{a+b}{x}$$
  
(b.)  $a^{3}x + ay = bx - b^{3}y = ab$   
(c.)  $\frac{1}{x} - \frac{1}{y} = \frac{1}{y} - \frac{1}{z} = \frac{2}{x} - \frac{3}{z} = 1$ 

8. A person bought oranges at the rate of thirty for a shilling. He found forty of them to be unsaleable, but he sold the rest at the rate of sixteen for a shilling, gaining  $66\frac{2}{3}$  per cent. on his outlay. Find the number of oranges bought.

9. At an election the successful candidate polled  $\frac{1}{m}$  of the whole constituency, obtaining majorities of a and b votes respectively over the other two candidates. Supposing that  $\frac{1}{n}$  of the electors refrained from voting, find the number of votes recorded for the successful candidate.

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

Carefully explain Euclid's definitions of a point, a line, a straight line, and a plane. Mention any practical method of testing (a) whether a line is straight, (b) whether a surface is plane. What is meant by an axiom? Can exception be taken to any of Euclid's axioms?
 If two triangles have two sides of the one equal to two sides of the other, each to each, and have also the angles contained by those sides equal to one another, the triangles are equal in

every respect.

A and B are any two points on opposite sides of the straight line EF: find a point P on EF such that the straight lines AP and BP shall be equally inclined to EF.

3. At a given point in a given straight line make an angle equal to a given angle. Construct a triangle, having given the base, one of the angles at the base, and a line equal to the sum of the sides of the triangle.

4. If two triangles have two angles of the one equal to two angles of the other, each to each, and one side equal to one side—namely, either the sides adjacent to the equal angles or the sides that are opposite to the equal angles in each—then shall the other sides be equal, each to each, and also the third angle of the one shall be equal to the third angle of the other. 5. The straight lines that join the extremities of two equal and parallel straight lines towards

the same parts are themselves equal and parallel.

The straight lines that join the extremities of two equal and parallel straight lines towards opposite parts bisect each other.

6. If a straight line be bisected and produced to any point, the rectangle contained by the whole line thus produced and the part of it produced, together with the square on half the line bisected, is equal to the square on the straight line that is made up of the half and the part produced.

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

8. ABC is a triangle and D is the middle point of BC; a straight line EDF is drawn through D and cuts the sides AB, AC, produced if necessary in E and F so as to make AE equal to AF: prove that BE is equal to CF.

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

1. Classify triangles (1) with respect to their angles, (2) with respect to their sides. Specify and define the different kinds of quadrilateral figures.

2. All the interior angles of any rectilineal figure, together with four right angles, are equal to twice as many right angles as the figure has sides.

Show that a square, a regular hexagon, and a regular dodecagon will fill up the space round a point.

In any right-angled triangle the square which is described upon the side subtending the right angle is equal to the sum of the squares described upon the sides containing the right angle.

If one of the acute angles of a right-angled isosceles triangle be bisected, the opposite side will be divided by the bisecting line into two parts such that the square on one part will be double of the square on the other.

4. In obtuse-angled triangles the square on the side opposite the obtuse angle is equal to the sum of the squares on the other two sides increased by twice the rectangle contained by either of those sides and the projection on it of the other side.

The base of a triangle is 63 ft., and the sides 25 ft. and 52 ft. : find the area of the triangle and the parts into which the base is divided by a perpendicular from the vertex.

5. In equal circles the angles which stand upon equal arcs are equal to one another, whether they be at the centres or at the circumferences.

If a tangent to a circle be parallel to a chord, the point of contact will be the middle point of the arc cut off by the chord.

6. If from a point without a circle two straight lines be drawn, one of which cuts the circle and the other touches it, the rectangle contained by the whole line which cuts the circle and the part of it without the circle shall be equal to the square of the line which touches it.

E.—1A.

If two circles intersect one another, the common chord produced will bisect the common tangent.

7. Show that the centre of the circle which touches the two semicircles described on the sides of a right-angled triangle is situated at the middle point of the hypotenuse.

8. To inscribe an equilateral and equiangular pentagon in a given circle.

9. The square on the side of an equilateral triangle inscribed in a circle is treble of the square on the side of a regular hexagon inscribed in the same circle.

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

1. Distinguish between the mass, the weight, and the specific gravity of a body; and between the velocity, the acceleration, and the kinetic energy of a body in motion.

2. A projectile discharged vertically upwards occupies two seconds in rising to a height of 96 ft. : find the whole height to which it will rise, and the whole time of ascent.

3. Define force and work, and explain how they are respectively measured.

A force equal to the weight of 20 lb. acts upon a mass of 75 lb.: find the acceleration, and the work done by the force per minute.

4. Show how the resultant of two forces, and of three forces, acting at a point may be obtained by a graphical construction.

A body weighing 12 oz. is suspended from a fixed point by a string 10 ft. long, and is drawn aside by a horizontal force to a distance of 6 ft. from the vertical line through the point of suspension : required the tension of the string.

5. What is meant by the moment of a force? Show that the moments of two forces about any point in the line of action of their resultant are equal and opposite.

A thin rod, without weight, has balls of 1oz., 3oz., and 5oz. weight attached to it at distances of 2 ft., 4 ft., and 6 ft. respectively from one end: how far from the same end is the point at which the rod must be supported in such a way that it shall remain in a horizontal position?

6. Define the centre of gravity of a body. If the positions of the centre of gravity of a body and of the centre of gravity of a portion of the body are given, show how to find the position of the centre of gravity of the remaining portion of the body. 7. Find the relation of the power to the weight in the first system of pulleys, in which each

string is attached to the supporting beam, friction and the weights of the pulleys being neglected. What is the mechanical advantage where there are five movable pulleys? 8. A cubical vessel, whose edge is 1 ft., is filled with mercury. Taking the specific gravity of

mercury as 13.6, find the pressures on the base and on one side of the vessel.

9. Show how to find the specific gravity of a mixture of substances whose volumes and specific gravities are known.

A piece of plated ware weighs 60 oz., and its specific gravity is found to be 8.1. Supposing the specific gravities of the unplated metal and of silver to be 7.5 and 10.5 respectively, find the weight of the silver.

10. State Boyle's law, and explain how the law may be experimentally verified.

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

Why is it 1. Explain how the fixed points of a mercury thermometer are determined. necessary to observe the barometer in determining one of the fixed points and not the other?

 Describe fully a method of determining the coefficient of expansion of a liquid.
 Distinguish between "evaporation" and "ebullition." State the circumst State the circumstances which

affect the rapidity of these actions in the case of a liquid contained in an open vessel. 4. Define "latent heat." What numbers express the latent heats of water and of steam?

If 100 grams of steam at 100° C. be led into a vessel containing a kilogram of snow at 0° C.,

how much of the snow will remain unmelted? 5. Explain the following terms as used in the theory of sound: Node, wave-length, pitch, musical interval, major third. On what circumstances does the pitch of the note emitted by a stretched string depend?

When a stopped pipe, 4 ft. long, and an open pipe, 6 ft. long, are sounded, what is the interval between the notes?

6. Show that when an object is placed midway between a concave mirror and its principal focus, or midway between the principal focus and the centre of curvature, the image in either case is twice the size of the object. What is the character of the image in each of these cases?

7. State the laws of the refraction of light. Under what circumstances does "total reflection" take place at the surface of a transparent body? What is the relation between the "critical angle" and "refractive index" of the substance?
8. What is meant by a "magnet-pole"? Define unit strength of pole, and unit intensity of a

magnetic field.

A magnet-pole of strength 12, when placed in a magnetic field, is acted on by a force of 30 dynes; what is the intensity of the magnetic field?

9. Describe the essential parts of a frictional electrical machine, and explain its action.
10. Describe Grove's cell. How are cells connected "in series," and "in parallel"?
If six Grove's cells are connected in series, each cell having an EMF of 1.95 volt and an internal resistance of  $\frac{1}{6}$  ohm, what current will they give through an external resistance of 12 ohms?

1. Define the terms-equivalent weight, valency, compound radicle, dibasic acid, and illustrate their meaning.

2. How can the composition of water be accurately ascertained? Do you consider that the evidence is absolutely conclusive? Give reasons for your answers.

3. Give a short account of the allotropic forms of sulphur and of phosphorus.

4. What do you understand by oxidizing agents and reducing agents? Show by typical reactions to which class each of the following substances is to be referred : nitric acid, chlorine, hydroidic acid, sulphur-dioxide, hydrogen-peroxide, arsenious oxide.

5. Give a list of three gases that are readily soluble, three that are moderately soluble, and three that are only sparingly soluble in water. Describe the preparation of any one of the readily soluble gases in a pure dry state.

6. What weight of sulphur-dioxide can be prepared from eight grams of sulphur? How much sulphuric acid will the gas thus prepared yield by oxidation in the presence of water? What volume of hydrogen measured at 0° C. and 760 mm. will be liberated if the acid thus yielded is acted on by metallic zinc, and what weight of zinc-sulphate will remain in solution?

#### (Zn = 65; S = 32; O = 16; H = 1.)

7. In what forms does silica occur in nature? How is silicon fluoride obtained, and how does it react with water?

#### Biology.-For Class D, and for Senior and Junior Civil Service. Time allowed; 3 hours.

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

#### ANIMAL PHYSIOLOGY.

1. Name and briefly describe the various organs found in the cavity of the thorax. How are they kept in position?

2. Describe the character of the blood and of any bodies found in it. What evidence have we of the circulation of the blood?

3. Describe the general characters of the vertebral column. Draw a single vertebra, naming its parts and stating the region to which the vertebra belongs. 4. What are the structure and properties of muscle? What do you know of any relation

between muscles and nerves?

5. What is a proteid? State how a proteid is digested and absorbed. Give examples of common articles of food (a) in which proteids are abundant, (b) in which they are present in small quantity, (c) from which they are absent.

6. Why does the body waste away? What are the chief eliminated? Describe the structure of any one excretory organ. What are the chief waste products, and how are they

7. Show how the spinal nerves arise, giving a diagram of a cross-section of the cord. How is the medulla oblongata (spinal bulb) connected with the rest of the nervous system? Show that the spinal bulb exercises important functions in regulating processes that go on in the body.

8. Describe the structure of the organ of hearing. How would hearing be affected (a) if the auditory nerve were cut, (b) if the tympanic membrane were removed? Give the reasons for your answer.

#### BOTANY.

1. Describe the structure of the leaf of any typical dicotyledon, giving a diagram of a section across the blade of the leaf. Account for the form of the leaf, and the mode of arrangement of the tissues.

2. What is chlorophyll, and in what parts of the plant is it found? What is its function? Describe experiments illustrating your answer.

3. What food do plants obtain from the ground, and how do they absorb and utilise it?

4. What is the difference between pollination and fertilisation? Describe both as exhibited in some flowering plant.

5. Show that it is advantageous for plants to have some method of dispersing their seeds. Describe the chief contrivances for securing the dispersion of seeds.

6. Describe the structure of two seeds, one with and one without endosperm, and show how they germinate.

7. Describe fully the structure of a flower in which the corolla is highly specialised for insect pollination. State the order to which the flower selected belongs.

8. Describe the chief kinds of fruits found in the Rosaceæ, and show how they are related to one another.

#### Music. Time allowed : 3 hours.

INSTRUCTIONS TO CANDIDATES.

(a.) For the sake of uniformity it is requested that the notes of the scale be referred to by their Tonic Sol-fa names—Dob, Ray, Me, Fah, Soh, Lah, Te—or their initial letters.
(b.) The Tonic Sol-fa terminology is used throughout this paper as being the more generally known among school teachers; but, where it is considered necessary, explanations in ordinary musical language are given in brackets, thus: "Three pulse measure [Triple time]."
(c.) Answers requiring the use of the Staff notation may be written in their proper place in the body of the paper, candidates ruling their own staves.
(d.) All candidates are expected to attempt the practical work (Question 18).

1. Between which notes (a) in the major scale, (b) in the harmonic minor scale, do the semitones occur?

2. Explain the terms diatonic and chromatic as used in music.

3. Two very important matters in connection with the teaching of singing are (a) correct breathing, and (b) sweetness of tone. How would you endeavour to secure these in classes of children a

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

5. How would you begin to teach time to classes of young children? (Do not encumber your answer with tables of time signatures, but make it as practical as is possible in a written paper.)

6. What is transition [modulation]? How is it shown in the Sol-fa notation, and say how it may usually be recognised in the Staff notation?

7. Give illustrations of a sharp, a flat, a natural, and a double-sharp, and state the effect of each.

8. The training of the ear is now regarded as one of the most important points in the teaching of music. How would you set to work in this matter?

9. Write a time-table for a singing lesson of half an hour, to include exercises in voice and ear training, time, sight reading (tune), a school song, and anything else you may think necessary or desirable.

10. What is an interval? Give simple rules for the naming of intervals, and write six named examples of your own choice, in either notation.

11. Give the meanings of (a) allegro vivace, (b) adagio, (c) piu forte, (d) meno mosso, (e) poco a poco, (f) da capo, or D.C. 12. Write, in either notation, any tune you can remember.

13. Take practical tests.

Any two of the following phrases to be imitated by the candidate from the Examiner's pattern :---Key C (or D).

$(a.) \left\{ \left  \mathbf{s} : \mathbf{t}_{ } \mid \mathbf{f} : \mathbf{m} \right. \right\}$	<b>d</b> :−+	:	$(b.) \left\{  \mathbf{d}:\mathbf{s} \mathbf{r}:\mathbf{f} \mathbf{m}:- :$
(c.) {  <b>s</b> : <b>fe</b>   <b>f</b> : <b>r</b>	d :	:	$(d.) \left\{   \mathbf{m}: \mathbf{l}   \mathbf{r}: \mathbf{s}   \mathbf{d}: -   \right\}$

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

About  $\downarrow = 66$ .

:1 :1 1.,1:1 1.1: .1:1 The following tune-test to be sung to the sol-fa syllables, and then to Lah, the Examiner giving the key-note :---

Key F.

ទ	:m.r   d	: s <sub>l</sub>	1	:d  m	:	$ \mathbf{f}  :\mathbf{m} \mathbf{r} $	: ទ	m	: fe	s	:
ទ	$:\mathbf{t}_{ }.\mathbf{d} \mathbf{r}$	:f	m	:r m	:	r.m: f. s   1	: 1	t	: r	d	:

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





The following tune-test to be sung to the sol-fa syllables or to Lah, the Examiner giving the key-note. (The key may be transposed at the discretion of the Examiner) :---



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

1. How would you put he, she, and it into Maori? Illustrate your answer by Maori sentences with an English translation.

2. Give the plural of tamaiti; the passive form of aru, tomo, whiu, karanga. Give sentences to illustrate your answer.

3. Show the difference between moe and moemoea, and between kohu and kohukohu. Give sentences in Maori and English to illustrate your answer.

4. Translate the following into Maori :---

He is going to Taupo to see his brother-in-law. She is at present living in the Tuhoe country, and will meet her brother there. How many times a day does she feed her birds, and does he always send her food for them? When he reached the top of the mountain he found her there amidst the snow and frost. He and she descended the mountain by the side opposite to that by which he had ascended. When they reached the foot of the mountain they entered a great forest. He left her in the forest and came out on to a large wide plain where there were many wild horses. As soon as the horses saw him they galloped away. He could not follow them. He saw her coming towards him, and waited for her.

5. Translate the following into English :---

Me kau e ia e tae ai ia ki tera taha o te awa, notemea kaore kau he tangata o reira hei whakawhiti mai i te waka ki a ia.

Kua korero ahau ki taua tangata, ki ana mai ia ki ahau, kaore ia e whakaae ki taku korero, notemea kei te mate taua kotiro a e kore e tere tona ora i tona mate.

Haere atu koe kia ahei ai ia te haere mai ki konei.

Hoatu koe, maku e haere atu.

Hoatu ki a ia te kuri nei, mana e homai te moni ki ahau.

I kite ia i te wahine, e haere atu ana, engari titiro rawa ake ia, e hoki mai ana ia ki a ia.

6. Translate the following into Maori:---

I think you do not know what taxes are. I must tell you, that you may understand some things you must read about in history.

Taxes are the money which subjects pay to the King or to those persons who govern the country for him.

I must now tell you why taxes are paid. Every man likes to live safely in his own house; he likes to know that he and his wife and his children may stay there without being disturbed, and that they may go to sleep safely, and not be afraid that wicked men or enemies may come and kill them while they are asleep. Next to his life and the lives of his wife and children a man likes to know that his money and his furniture are safe in his house, and that his horses and cows, and his trees, and his cornfields are safe out-of-doors.

Now, he could never watch all these things himself, and perhaps he might not be strong enough to fight and drive away wicked men who might try to rob or kill him; so he gives money, which he calls taxes, to the King, who pays soldiers and sailors to keep foreign enemies away, and policemen to watch the streets and houses, to keep away thieves and robbers; besides, he pays the Judges to punish men who are found doing anything wrong. So you see that whoever wishes to live safely and comfortably ought to pay some taxes.

7. Translate the following into English :---

I mua o te taenga mai o te Pakeha ki enei motu, e kapi ana te nuinga o te whenua i te ngaherehere me te rarauhe, a he kotahitahi nei nga wahi e mahia ana ki te kai. Kaore kau he kaanga, he witi, he oti, he taewa ranei a te Maori i tau wa, he mea hari katoa mai enei tu kai e te Pakeha ki konei; heoi a te Maori kai i haria mai e ona tupuna ki enei motu, hei mahi mana ki te whenua, he kumara, he taro, he hue. Ko nga whare o te Maori kaore i penei te ahua me o te Pakeha e mahia nei ki te kohatu me te papa rakau, engari tuparutia ai a waho ki te raupo me te wiwi; he mea whakairo nga pou me nga heke, a tuituia ai a roto ki te kakaho me etahi atu mea. Ko o te Maori pueru he mea whatu ki te muka harakeke, he mea whakapaipai a waho, he tu pueru ano ki te huruhuru manu, he mea ano ki te taniko, me era atu mahi pera a te Maori. He maha nga ahua me nga ingoa o ona kakahu; he ihupuni he korowai, he paepaeroa, he pureke, he pora, he aha, he aha. I taua wa kaore kau ana mea rino hei tua i te rakau, hei ahu i te whenua, hei hanga i ona whare me ona pa, kei tarai i ona waka. Heoi ana mea hei mahi i aua mea katoa he toki, he pounamu, he mata, he makoi kuku, he wheua ika, he rakau, ka mutu.

4—E, 1A,

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

1. Prove that the circumference of a circle varies as its radius. If the radius of a circle is 10 ft., find the length of an arc of 45° in the circle, and the area of

the corresponding sector. 2. Show that sec  $(180^\circ - A) = -\sec A = \csc (270^\circ \pm A)$ ; and find the general expression for all angles having the same secant.

If see  $A - \cos A = \frac{3}{2}$ , find the general value of A. 3. Show that  $\frac{\sin A}{1 + \cos A} = \tan \frac{1}{2}A = \frac{1 - \cos A}{\sin A}$ ; and find expressions for tan 2A and tan 4A in terms of tan A.

4. Prove the following relations :---

- $\sin 3A = 3 \sin A 4 \sin^3 A;$ (a.)
- $\sin A(1+\sin A)\left(1-\tan \frac{A}{2}\right) = \cos A(1-\cos A)\left(1+\cot \frac{A}{2}\right);$ (b.)
- $\frac{\cos 3A + \sin 3A}{\cos A \sin A} + \frac{\cos 3A \sin 3A}{\cos A + \sin A} = 2.$ (c.)

5. Show that, if  $\cos A = \cos B \cos C$ , then  $\tan \frac{1}{2}(A+B) \tan \frac{1}{2}(A-B) = \tan^2 \frac{1}{2}$ . 6. Show that in any triangle, adopting the usual notation,-

 $\sin \frac{1}{2}\mathbf{B} = \sqrt{\frac{(s-a)(s-c)}{ac}};$ (a.)

(b.) 
$$\frac{\cot \frac{1}{2}B + \cot \frac{1}{2}C}{\cot \frac{1}{2}A} = \frac{a}{s-a};$$

 $\frac{\cot \frac{1}{2}B + \cot \frac{1}{2}O}{\cot \frac{1}{2}A} = \frac{a}{s-a};$   $\cos A + \cos B + \cos C = 4 \sin \frac{A}{2} \sin \frac{B}{2} \sin \frac{C}{2} + 1;$ (c.)

(d.) 
$$\frac{1}{2}(a^2 - b^2) = \frac{\sin A \sin B}{\sin (A - B)} =$$
area.

7. The angles of a triangle are as the numbers 1, 2, 3, and the perpendicular from the greatest angle upon the opposite side is 10 ft. : find the area of the triangle. 8. In a triangle ABC, given b = 251, c = 372,  $A = 40^{\circ} 32'$ , find B and C.

8. In a triangle ABC, given b = 251, t = 512,  $A = 40^{\circ} 52^{\circ}$ , in a B and C. [log 121 = 2.0827854, log 623 = 2.7944880, L cot  $20^{\circ} 16' = 10.4326795$ , L tan  $27^{\circ} 44' = 9.7207827$ , L tan  $27^{\circ} 45' = 9.7210893$ ] 9. Two rocks A and B were observed from a ship to be in a line bearing E.  $30^{\circ}$  N. After

the ship had sailed N. 30° E. for ten miles A bore S. and B bore S.E.: find the distance between the rocks.

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

#### INSTRUCTIONS TO SUPERVISORS.

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

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

3. Dictate the passages at the following rates of speed :----(a.) 80 words a minute. (b.) 120 " " (c.) 150 " "

N.B.—It will be well to practise reading these aloud some time beforehand, looking at a watch or clock, so as to accustom yourself to reading at the exact rate indicated. The matter to be read is marked off into sections, each of which is to occupy a minute. The Supervisor will perhaps find it advisable to mark it off into smaller sections, each containing the number of words to be read in fifteen seconds, and to read one section in every quarter of a minute. As the candidates hear the passage read only once, the reader's articulation ought to be very clear, and the candidates ought to be so placed as to be able to hear well.

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

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

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

#### PASSAGES FOR DICTATION.

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

It is seldom even in the history of an empire like ours that a measure of such magnitude and of such far-reaching importance as the Australian Commonwealth Bill is submitted to the Legislature for sanction. The colonies to which it applies to-day are great and powerful States, but their resources are so vast, their natural advantages so exceptional, and their political position so fortunate that the imagination is overcome by the fair prospect which seems

- 1 to await the young and vigorous nation that possesses them. In the luminous and statesmanlike speech in which the Secretary of State for the Colonies introduced the Bill he showed that he was conscious of the historical character of the occasion, and proud of the privilege, as he rightly termed it, of formally presenting to the mother of Parliaments this great achievement of the sons who have borne her civilisation to the other side of the world. He spoke
- 2 with a dignity not unbefitting 1 the birth of a new nation within the limits of the British Empire, with a sympathy merited by the arduous and patient efforts to which this memorable advance in Imperial consolidation is due, and with a fairness and a judicious regard for all of the complicated interests actually or possibly involved in its accomplishment which must everywhere command the respect and the appreciation of sincere Imperialists. The history
- 3 of the movement for federation with which he prefaced his account of 1 the Bill shows how serious were the difficulties which Australian statesmen like the late Sir Henry Parkes, Mr. Barton, and Sir Samuel Griffith—to mention but a few out of many eminent names—had to overcome before they could bring the great scheme, now on the point of adoption, within the range of practical politics. The consolation which those of them who are with us now
- overcome before they could bring the great scheme, now on the point of adoption, within the range of practical politics. The consolation which those of them who are with us now 4 enjoy, that their labours have been fruitful labours, and that they have laid broad and deep the foundations of a commonwealth surely destined to act a great part in the history of mankind, must afford them a satisfaction such as rarely falls to the lot of public men. Their work is worthy of all the pains and all the toils that it has cost. It is, in Mr. Chamberlain's words, "a monument of legislative competency." The whole Empire will agree
- 5 with him in congratulating them and those they represent on this palpable proof that | they inherit in the highest degree the practical legislative sense to which Great Britain and her self-governing colonies owe their position in the world. No praise, as Mr. Chamberlain said, can be too high for those whose moderation, patience, skill, mutual consideration, and patriotism have been able to produce so great a result.
- A measure of so wide a scope, dealing practically with the chief subjects which go to make up the political life of a people, may naturally arouse considerable differences of opinion even in the minds of the most friendly critics. Mr. Chamberlain did not deny that, if the Home Government had been invited to frame the constitution, or consulted upon its provisions there are points which they might have wished to see settled otherwise than they have been settled in the scheme now before Parliament. But the Colonial Secretary, speaking the mind of the immense majority of British subjects, drew a sharp distinction between matters in 7 which it is admissible and right to insist upon such differences, and matters in which the Home Government and the Home Parliament are not morally competent to do so. He repudiates altogether-and on such evidence as is available we believe him to be justified in repudiating---the view upheld by Sir Henry Campbell-Bannerman that the Australian people regard the Imperial Parliament as merely a court for the registration of their decrees, and that they will be offended or | insulted by any amendments of any kind to the Bill. But at the same 8 time he is deeply sensible of the duty we owe to Australia of paying the utmost regard to her labours and to her desires. We have come to a period, he said, in our relations with the great self-governing colonies where we recognise that our relations with them depend entirely on their free will and consent. At the same time Her Majesty's Government cannot ignore | the 9 fact that they are trustees for the Empire as a whole, and cannot honourably assent to action by any part of it calculated to prejudice unduly any other part. Guided by these principles, they ask Parliament on the one hand to accept every clause and line and word of the Bill sent Home by the Australian Colonies which deals exclusively with the interests of Australia. On

these interests they recognise that the judgment of the Australian people is decisive.

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

Mr. Chamberlain said,—I have no doubt there are many members of the House who will be inclined to envy me the privilege that has fallen to my lot in introducing this Bill for the federation of some of our greatest colonies-a Bill which marks an era in the history of Australia, and is a great and important step towards the organization of the British Empire. This Bill, which is the result of the careful and prolonged labours of the ablest statesmen in Australia, enables that great island continent to enter at once the widening circle of English-No longer will she be a congeries of States each of them independent of speaking nations. 1 the others, a position which | any one will see might possibly in the future, through the natural consequences of competition, become a source of danger, and lead, at any rate, to friction and to weakness. But, if this Bill passes, in future Australia will be, in the words of the preamble of the Bill which I am about to introduce, "an indissoluble federal Commonwealth firmly united for many of the most important functions of government." After it has been passed there will be for Australia under one Administration a uniform postal and telegraphic service, and provision is made making it possible hereafter for railway communication to be under similar control. In the meantime everything which has to do with the exterior relations 2 of the six colonies concerned will be a matter for the Commonwealth, and not for the independent Governments; a common tariff will be established for all the colonies; there will be at the same time intercolonial free-trade, and, what is perhaps more important than all, in future there will be a common form of control of national defences. Now, this is a consummation long expected and earnestly looked for by the people of this country. We believe that it is in the interest of Australia, and this has always been with us the first consideration. we recognise that it is also in our interest as well; we believe the relations between ourselves 3 and these colonies will be simplified, will be more | frequent and unrestricted, and, if it be possible, though I hardly think it is, will be more cordial when we have to deal with a single

central authority instead of having severally to consult six independent Goverments. Whatever is good for Australia is good for the whole British Empire. Therefore we all of usindependent of party, whether at Home or in any other portion of the Empire-rejoice at this proposal, welcome the new birth of which we are witnesses, and anticipate for these great free and progressive communities a future even more prosperous than their past, and an honourable and important position in the history of the Anglo-Saxon race.

I hope the House will not think I | am unduly occupying time if, in a few brief words, I give some account of the history of this great movement. The House is aware that the first colonisation of Australia took place in New South Wales in 1788, and that for nearly a generation after that time as other settlements were made at vast distances along the coast they all came, in some measure, under the control of what I may call the central Administration existing at Sydney. But it will readily be seen that, as these settlements gradually became more populous and of greater importance, the difficulty of such a system of central administration became almost intolerable; and accordingly in 1825 what | was then known as Van Diemen's Land became a separate colony under the name of Tasmania, and the example of Tasmania was followed in succession by Western Australia, South Australia, Victoria, and lastly by Queensland in 1859. Now, Victoria, which was then known as the Port Philip Settlement, was separated from New South Wales by Act of Parliament in 1850; but in 1847, when giving assent to this proposal, Earl Grey, to whom we all must feel we owe most of the principles by which our colonial policy is guided, laid down the views then entertained by him and Her Majesty's Government of the time in reference to the ultimate necessity | for some control outboards in Arsterille - He will

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1

central authority in Australia. He said :-"It is necessary, while providing for local management of local interests, we should not omit to provide for the central management of all interests not local. Questions having a bearing on the interests of the Empire may be left appropriately to the Imperial Parliament; but there are questions which, though local to Australia collectively, are not merely local in relation to one colony, though each may have part in a common interest, and in regard to which it may be essential to the welfare of all to have a single authority, and they may more appropriately and effectually be decided by a single authority in Australia that by the more

remote, less | accessible, and, in truth, less competent authority of Parliament." It will be seen that Earl Grey foresaw that in the future, at any rate, this necessity would arise. He was a little before his time, for when, in 1856, he introduced proposals for constituting such central authority, his proposals met with no general support, and the Bill, when it became an Act, was confined to the establishment of the Colony of Victoria, separating it from the older Colony of New South Wales. But from this time, and continuously down to the present day, the subject of some closer union between the separate Australian provinces or states has attracted the attention of all far-seeing and patriotic statesmen, | especially in Australia. And among those who laboured in this movement I think it would be ungrateful not to mention the name of Sir Henry Parkes. Sir Henry Parkes was certainly a most remarkable individuality; he had his peculiarities, as most of us have, but no one would deny that he was a man of great capacity, of great power of work, of great resource, and of intense local patriotism; and I think that to-day, when the consummation of the work for which he laboured so long is clearly within sight, we may well bear his memory in respectful regard. In 1867 the Dominion of Canada was established. This gave to Sir Henry Parkes an opportunity which he was not slow to seize, and, although he had raised the question before, he now again emphatically urged his fellow Australians to follow the example of the Dominion of Canada. Still, however, no progress was made. A little later the somewhat sinister activity of certain foreign Powers in the Pacific brought the matter home in a clearer degree to the majority of the Australian people; and in 1883, accordingly, a conference was called, again at the instance of Sir Henry Parkes, of all the colonies, which resulted in certain recom-mendations, in the adoption of certain general principles, which led almost immediately to the establishment of what is known as the Federal Council. The Federal Council, however,

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

We have been blamed for withholding important information from the Government. We have been denounced for publishing despatches. If a general failed in the operations we have been condemned, but we were responsible for his appointment. If a general was censured or recalled, the people who have clamoured for punishment were precisely the people who cried out against the injustice. Well, I am prepared here also to take, without complaint, all the blame for every failure of every kind which has occurred or which may occur in the course of the negotiations or in the course of the war. That I will do readily on behalf of my colleagues if only you will give us a fair share of credit when success comes. But, first, think for a moment; put yourselves in our position. We are conducting what I have called a great war under absolutely novel conditions. It has fallen to our lot to make the first experiment in actual warfare with an enemy armed with Mauser rifles, with smokeless powder, with the most powerful modern artillery. We have had to meet a foe as brave as ourselves, and skilful in a particular form of defensive warfare of which no experience on a large scale had hitherto been had by any military Power, and, under those circumstances, our generals have made mistakes, and we are responsible for them. I would like to know which of our critics, whether they be at home or abroad, would have done better under similar circumstances. What is the experience of past wars? I have lived to see many great wars. I have lived to see the Crimean war, the Civil war in America, the Prusso-Austrian war, the Franco-German war, and, more recently, the Spanish-American war, and in all of these | at the commencement of the war, and possibly throughout the war, mistakes have been made which are as great, and,

perhaps, greater even than those which have been made by our generals and by our Administration. But do not excuse us, gentlemen; blame us, because that will help us to correct these mistakes. But do not think that Englishmen alone make mistakes, and do not be afraid that if even greater trials should befall us we shall not be able to hold our own with any who come against us. It is quite true we underestimated, not the numbers of the Boers, not the amount of their arms and ammunition, because our Intelligence Department was accurately informed in regard to all these particulars; we did underestimate the force and the value of the resistance which would be brought against us. But so did every one else. So did all the people on the spot who are supposed to know everything. So did our foreign critics. As far as I know, there was not one single man, either in England or outside, of any con-

- As far as I know, there was not one single man, either in England or outside, of any considerable reputation who anticipated that the Boer army would prove as formidable a force as it undoubtedly has done. But, then, when the early experience of the war showed that we had made this mistake, have not we, has not the country, some right to be proud of their own temper and resolution, which never flinched for an instant under the reverses that they were called upon to bear, and have not they the right to be proud of the resources which were called out and of the efforts which this country made to repair those mistakes? Those who
- 4 hate us—and there are a few of them—those who hate us say that they see in | this war a proof of the military weakness of this country. They must have thought us very strong before. I would not advise them now to act upon their opinion, which I do not suppose is shared by the best authorities in the countries in which this opinion is said to prevail. But supposing that twelve months ago any man had said in public that this country would be able to send out from its own shores and from its own citizens an army of more than 150,000 men fully equipped, that it would be joined by another force of more than 30,000 men voluntarily offered by our self-governing colonies, and consisting of men who, I have the authority of 5 one of the bravest generals who has been in the field to say, are as good as the best troops

### Shorthand.—For Junior Civil Service. Time allowed : 3 hours. INSTRUCTIONS TO SUPERVISORS.

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

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

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

(a.) 50 words a minute.

(b.) 80 "

(c.) 100 "

N.B.—It will be well to practise reading these aloud some time beforehand, looking at a watch or clock, so as to accustom yourself to reading at the exact rate indicated. The matter to be read is marked off into sections, each of which is to occupy a minute. The Supervisor will perhaps find it advisable to mark it off into smaller sections, each containing the number of words to be read in fifteen seconds, and to read one section in every quarter of a minute. As the candidates hear the passage read only once, the reader's articulation ought to be very clear, and the candidates ought to be so placed as to be able to hear well.

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

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

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

#### PASSAGES FOR DICTATION.

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

But the Spion Kop despatches certainly did not reach us in a shape at all corresponding with what is laid down in the Queen's Regulations. They cover altogether some forty-five pages of print, and I think I am right in saying they contain altogether twenty different

- pages of print, and I think I am right in saying they contain altogether twenty different 1 documents of one sort or another, many of them being of such a kind that their inclusion in a despatch would not be in accordance with the Queen's Regulations—documents the nature of which shows clearly that they ought not properly to be regarded as forming part of the 2 despatch, and that they were probably not so regarded by those who had written them or sent
- 2 despatch, and that they | were probably not so regarded by those who had written them or sent them Home. That was the position in which we found ourselves, and we had to decide what we would do. The alternatives open to us were limited in number. We might publish nothing at
- would do. The alternatives open to us were limited in number. We might publish nothing at all; and I gather that is a course which would have found favour in many quarters. But if we had done that it would have been a new departure of a very abrupt kind. We should have been establishing a new principle—the principle that we might publish so long as a
- have been establishing a new principle—the principle that we might publish so long as a 4 despatch i contained nothing but praise, but that a despatch containing dispraise was to be held back from publication. I strongly suspect that if we had taken that line the public would have endeavoured to insist upon publication; and I doubt extremely whether we should have

- been able to offer a successful resistance. Why, my lords, that action at Spion Kop cost us 5 over 1,600 casualties. I doubt whether there was any engagement in the campaign which aroused a deeper public interest than the battle of Spion Kop; and do your lordships think
- 6 that it would have been possible | for us, if asked whether there were any despatches about that engagement, to make reply that we had such despatches, but that we intended to keep them
- that engagement, to make reply that we had such despatches, but that we intended to keep them to ourselves, or that that answer would have been accepted as sufficient and satisfactory by the public? I doubt it extremely. We should have been exposed to a well-known ordeal in public life—the ordeal of question and answer. We should have been asked whether there were despatches, and should have had to answer "Yes." We should have been asked whether they contained such-and-such statements. If we said "No," we i should next be asked whether they contained such-and-such another statement. In that way the contents would have been wormed out of us: and it is my belief that in the end—what with being shelled in Parliament 7
- 8 wormed out of us; and it is my belief that in the end-what with being shelled in Parliament
- 9 and sniped at in the Press-we should be compelled to | make a clean breast of it, and lay the papers upon the table of the House of Commons. But, supposing we had resisted successfully the demand for publication, do you think the result would have been to screen the generals responsible entirely from blame? Why, it was a matter of
- 10

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

Governments may come and go; feelings may change from year to year. That root of bitterness against England, which I am wholly unable to explain, may be a mere caprice, merely something to satisfy the exigencies of the journalists of the moment, or it may indicate some deep-set feeling with which at a later date we shall have to reckon. We can have no security in any confidence in the feelings or sympathy of other nations, however much we We can have no

- may honour them, however grateful we may be for the sympathy they have shown us—we can have no security except in the efficacy of our own defence and the strength of our own right arm. Everywhere you see the powers of offence increasing—armies become larger, navies are founded, railways, telegraphs, all the apparatus which science has placed at the disposal of war becomes more perfect and more effective; and all these things may, by one  $\mathbf{2}$
- of those strange | currents which sweep across the ocean of international politics, be united in one great wave to dash upon our shores. Do not imagine that I wish to paint the future in dark colours. I am not urging despair. I am not urging even a dark appreciation of the future; but I am urging the necessity of precaution in time. It may be that your precautions— as I trust they may—will turn out entirely unnecessary. It will be a great | matter of hearty
- congratulation if it is so; but the loss that you will thereby sustain is so inconceivably small compared with the loss which you will sustain if your precautions are inadequate that you will not for a moment measure one against the other. Undoubtedly it is not a question so much of feeling, but it is a question of this strange phenomenon which is working itself out
- before our eyes, that the material for military action, for aggression, | is increasing in power and efficacy in every one of the great nations every year, while the temptations to exercise it, the territories of which it may give the possession and the key, are falling more and more at the disposal of the chances of war. You must not be blind to that species of danger which must constantly beset you; and allow me to remind you that as a great maritime Power you stand in a special position. The great military Powers of the Continent, disposing of great territory, have passed 5
  - through unsuccessful wars which again and again have brought the enemy into their country, and yet they are as strong, or even stronger, after the experience has passed by. Can we say with confidence that that would be the fact if London were the scene of a similar operation?
- Remember what has happened to the great maritime Powers of the past—to Holland, to Spain, to Venice, ] and, if I might go into ancient times, to Carthage and to Tyre. In every one case the great maritime Power has been paralysed and killed, not by the disasters it may have suffered in its provinces or its outlying dependencies, but in every case it has suffered by the blow directed at the heart. That is a lesson which a power like England ought not to neglect. As long as our heart is unstruck we may look with comparative indifference to the
- result of any war. If our distant provinces were affected we might do as we did in the Peninsular War-we might win them back again. But if our heart is struck there is at once
- an end to the history of England. Of course, we have the navy, and I firmly believe that that defence will be sufficient. But considering the prodigious, the enormous, interests which we have to safeguard, is it wise that all our eggs should be put into a single basket? Are we not bound to think of our national defence on land? And our national defence on land has this difficulty attached to it: The problem is that we cannot have recourse to the remedy, to the defence, to the protection which every nation on the Continent has had occasion to set up and to preserve, and to which its existence is now owing. Nothing in the nature of a con-
- scription—that is to say, nothing of a nature which requires the population of this country to leave their homes for a certain number of years to learn the military art—that, at present, as far as we can see, is not a remedy which the people of this country would accept. And what we have to look to, what we have to determine just now, is how is the manhood of this 10 country to be utilised for the preservation of the Empire?

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

I know that our Empire at this moment is regarded with great jealousy, and even with great dislike, throughout the earth. It is vain to shut your eyes to these things, and those who are cognisant of the spirit which inspires not the governments but the nations of the great majority of the countries of Europe must feel, without charges of panic or pessimism being brought against them, that our country cannot be too well prepared for every emergency

### ANNUAL EXAMINATIONS, 1901.

LIST OF EXAMINERS.

Adams, Charles E., B.Sc. Cook, Professor Charles H. H., M.A. Davies, George H. Easterfield, Professor Thomas H., M.A. Gilray, Professor Thomas, M.A. Gray, George, F.C.S. Grossman, Mrs. Edith H., M.A. Harkness, John, M.A. Hyde, Frank. Lawrell, Miss Maud E., M.A. McArthur, Alexander, M.A., LL.D. Maclaurin, Professor Richard C., M.A. Mathews, Rev. Richard T., B.A. de Montalk, Joseph W. E. P., B.ès Lettres. Parker, Robert. Riley, Arthur D. Rowe, Thomas W., M.A. Shand, Professor John, M.A., LL.D. Thomas, Professor Algernon P. W., M.A. Wilson, Kenneth, M.A.

when it has so large an army abroad. My view of the situation is this: that though the
Empire is at | war in South Africa that is only one of her interests, and that we should not allow our other interests, spread all over the world, to be weakened in any way or to be neglected in any way owing to the fact that other countries believe that we have both our fists tied up in South Africa. But that is a digression. I was saying we cannot shut our eyes to the fact that our Empire is an object of suspicion, jealousy, and hatred to the great mass of the nations of Europe at this moment. I think it is | an uninstructed mass. I think if they knew the merits of the dispute better than they do, I think if their Press was not so uniformly

- 2 nations of Europe at this moment. I think it is an uninstructed mass. I think if they knew the merits of the dispute better than they do, I think if their Press was not so uniformly biassed, they would come to a different conclusion. But I often wonder when I read these fiery articles against Great Britain, proposing a league to stamp this pestilential country off the face of the globe—a league which could be much more easily planned than executed—what the world would gain by the extinction or obliteration of Great Britain. Have they ever
- 3 realised what that country is to the world, how, when the balance | hangs between peace and war, the interest and the policy of Great Britain always causes its weight to be thrown in the balance of peace? Have they realised what the free-trade of the Empire means to their merchants? Why, we know in how many parts of the world, partly owing to our free-trade, partly owing to our generous encouragement of other nations, their commerce is beginning to push ours out. But, in any case, a country like ours, which depends for its prosperity on
- 4 peace and on commerce, is an element in the universe at large that not our I most arrogant enemies could afford to eliminate. But we, on our side, cannot afford to rest on moral aphorisms or the logic of events. We have to be ready and to be prepared. We have already borne great sacrifices for the Empire, and are willing to bear greater still. We are ready to do all that in us lies to promote the unity of the Empire, and we in this association shall watch and foster and encourage every hopeful and encouraging symptom from any
- 5 quarter which may justify us in hoping that before long we may see the Empire united.

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