

## **Technical Report: June 2019 CKE 1**

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**Human Resources Professionals Association**

29 July 2019



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# Executive Summary<sup>1</sup>

*Note that this technical report covers only the primary new form or forms administered during an administration, and not detailed results for all forms used (which may include previously used forms, scrambled forms, and other modifications to maintain exam and score integrity).*

The Comprehensive Knowledge Exam 1 (CKE 1) was administered to 182 candidates using computer-based testing at Prometric test centres June 3–17, 2019, inclusive. The examination comprised 175 four-option multiple choice items and had a 3½-hour time limit.

As per the CKE 1 blueprint, the exam was scored using the 145–155 best-performing items (while adhering to the prescribed distribution across functional areas). The mean score for first-time candidates<sup>2</sup> ( $n=128$ ) was 101.1 (67.4%), and for all candidates it was 96.9 (64.6%), out of 150 scored items. Reliability was strong at .90. The final set of scored items adhered to the blueprint parameters.

The pass mark was set using equating back to the June 2018, October 2018, and February 2019 administrations, yielding an integer pass mark of 94. Equating was conducted to compensate for minor changes in exam form difficulty so that any given candidate has an equivalent hurdle regardless of when they write the CKE 1. This pass mark resulted in a pass rate for first-time candidates of 65.6% and a pass rate for all candidates of 56.6%.

This report, the analyses performed, and the processes followed are consistent with NCCA standards<sup>3</sup> and ISO 17024 standards.<sup>4</sup>

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<sup>1</sup> This technical report is an abbreviated version of the full report. Information has been excluded that if known to candidates could negatively affect the validity of future candidate test score interpretations. This includes item-level statistics, some information about the construction of test forms, and some specific details concerning equating.

<sup>2</sup> Excludes those who had failed an HRP A examination in the past, who were identified as being statistical outliers, or who had written an alternative test form.

<sup>3</sup> National Commission for Certifying Agencies (2014). *Standards for the accreditation of certification programs*. Washington, DC: Institute for Credentialing Excellence.

<sup>4</sup> International Organization for Standardization (2012). *ISO/IEC 17024:2012 Conformity assessment – General requirements for bodies operating certification of persons*. Geneva: International Organization for Standardization.

# Administration

## Form Setting

Using only validated test items, Wickett Measurement Systems prepared 2 new 175-item test forms (using a combination of scored and experimental test items). Wickett constructed the final test forms according to the following parameters:

1. Including only items validated by the validation panel in the past year
2. Fitting the total item count of 175
3. Excluding enemy items
4. Matching the blueprint target value (+/- 2%) for each functional area
5. Maximizing spread across competencies
6. Reducing item exposure
7. Selecting items with perceived psychometric effectiveness, using statistics from previous administrations as available

Wickett proofed the final forms for text errors and detection of potential enemy items. Items flagged as enemies were replaced.

The final form composition for the June 2019 CKE 1 forms is shown in Table 1. All functional areas are within the limits of their targets, and therefore the forms reflect the blueprint (see Appendix A for the CKE 1 blueprint).

Note that at any administration, HRPAs also makes use of previously validated and administered test forms along with new test forms, in addition to employing other mechanisms to maintain the integrity of the exams and candidate scores.

Table 1: Test forms as administered

	Functional Area	Actual Items	Target	Variance
10	Strategy	7	7	—
20	Professional Practice	20	19	+1
30	Organizational Effectiveness	23	23	—
40	Workforce Planning & Talent Management	23	23	—
50	Labour & Employee Relations	19	19	—
60	Total Rewards	22	23	-1
70	Learning & Development	22	23	-1
80	Health, Wellness & Safe Workplace	20	19	+1
90	HR Metrics, Reporting & Financial Management	19	19	—
	<b>TOTAL</b>	<b>175</b>	<b>175</b>	<b>—</b>

## Testing Window

The examination was administered via computer-based testing at Prometric test sites primarily in Ontario. The testing window was June 3–17, 2019, inclusive, and 182 candidates wrote the exam.

Candidates had access to a basic-function calculator on screen. No other aids or resources were allowed.

# Analysis

## Data Cleaning and Integrity Checks

Prometric provided data in .xml format via a secure ftp site. Candidate files were provided as candidates completed the examination throughout the testing window. These files were extracted to Microsoft Excel for processing. They contained identifying information for each candidate, form information, start and stop times, answer string, key string, candidate total score, item comments if the candidate made any, and time spent per item.

The data files received were reconciled against the roster provided by Prometric to ensure that all .xml files had been received. Further, each candidate total score as computed by Prometric was reconciled with that computed by Wickett for the full set of 175 items to verify key accuracy. Comments on items were also reviewed to identify any specific item-level issues. No problems were encountered.

The average time taken by all candidates was assessed to detect potential examination timing concerns. The distribution is shown in Figure 1. The mean was 2 hours, 33 minutes (6 minutes less than in February 2019; on average, form A required 2 hours, 31 minutes and form B required 2 hours, 35 minutes). The time limit on the CKE 1 was 3½ hours, suggesting that time was not a factor in scores across candidates.

Twelve candidates (7%) took the full 3½ hours, suggesting that those candidates may have wanted more time, and 1 candidate (1%) left at least 1 item blank, suggesting that that candidate timed out of the exam before being able to complete it. These metrics will continue to be monitored, but at present do not appear problematically high.

The correlation between scores on the 175 items and time spent writing the examination was negligible at a value of .05 for form A and -.08 for form B, suggesting that time constraints were not generally an issue for candidate performance.

Candidate scores across the window were computed to look for any evidence of item exposure. As shown in Figure 2, there was little variation across the window. The difference between scores for candidates writing in the first 3 days and those writing in the last 3 days was a decrease of 5.5 marks out of 175.

As a matter of interest, candidate volumes were also examined across the window; these are also shown in Figure 2. Though not psychometrically meaningful, there is a clear pattern for candidates to prefer to book at the end of the window rather than the start.

Figure 1: Examination time distribution for all candidates

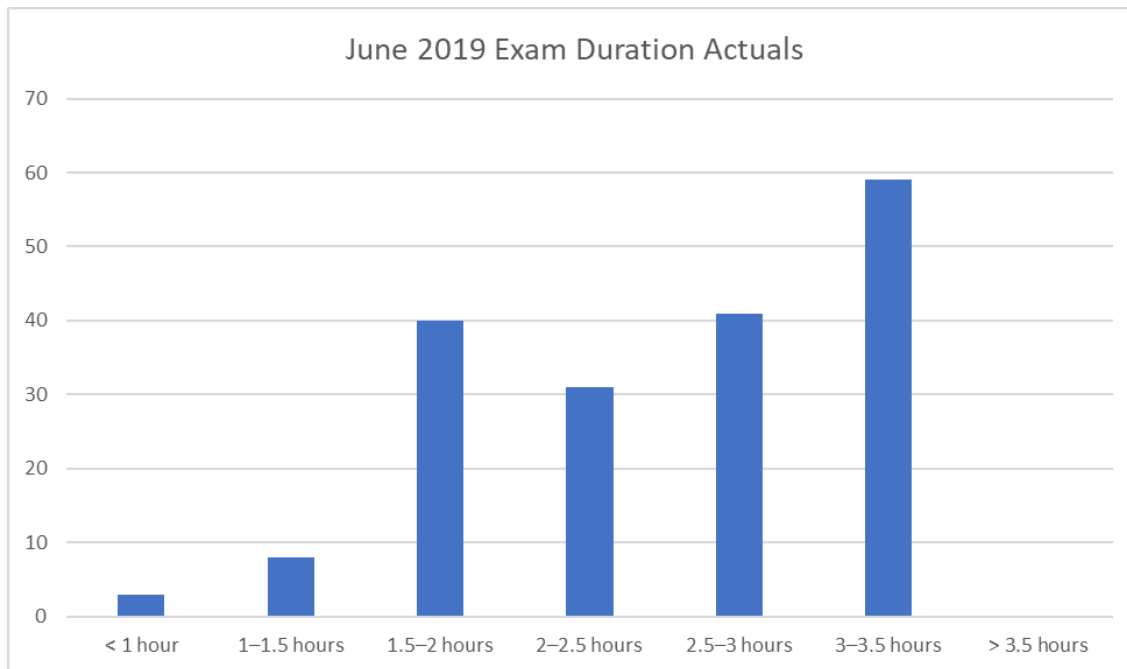
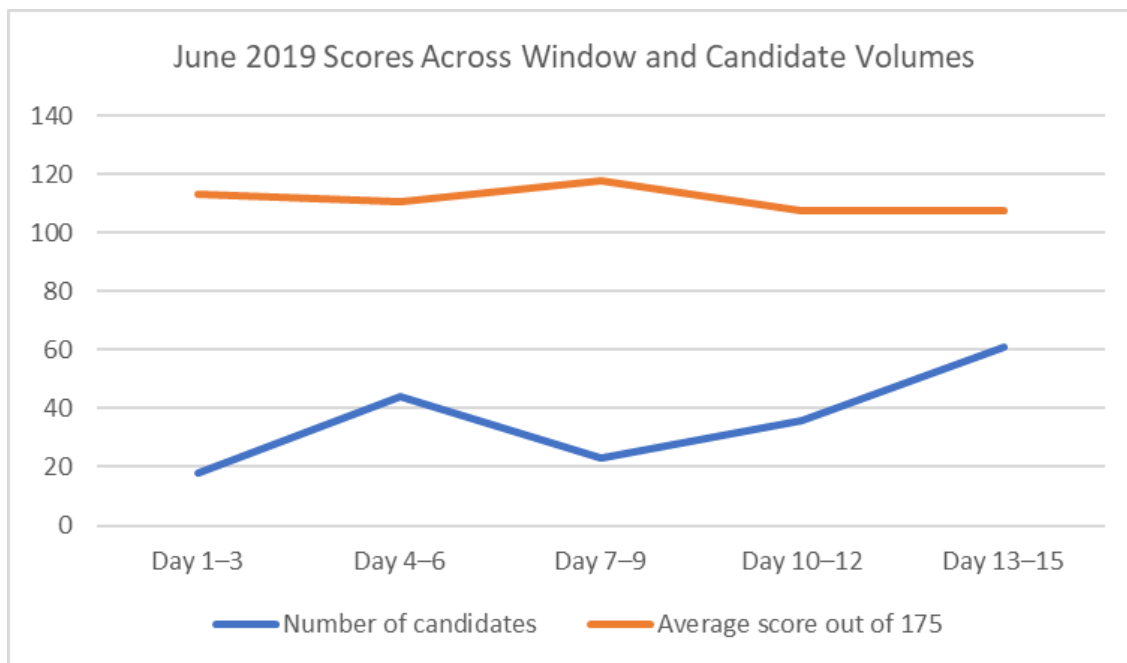


Figure 2: Candidate volume and score trends across testing window



After removing candidates who were administered a previously used test form (who were scored using the same decisions employed at the time that form was originally used), scores were calculated for all remaining candidates based on the full set of 175 items. One candidate was flagged for an abnormally low or high score ( $z$  value outside  $\pm 3.0$ ). Also, the 175 items were arbitrarily broken into 7 blocks of 25 items for each candidate; the 7 resulting subscores for



each candidate were evaluated for outliers as well. For candidates with any subscore more than 3 standard deviations (SD) from their average z-score, the .xml file was examined closely for any issues. All outliers were removed from initial analyses; candidates with abnormal response patterns were also removed. Candidates who left 5 or more blanks were also flagged for removal from analysis. To be conservative, candidates who had been granted a testing accommodation with changed administration conditions were also removed from the main analysis (simply because their testing conditions were not the same as the main group of candidates, even though each accommodation was granted on the premise that it would make the testing experience equivalent in terms of opportunity to demonstrate competence). As a result of all of these factors, 5 candidates were removed from analysis.

Candidates who had failed a previous HRPA examination (CKE, CKE 1, or CKE 2) scored lower than did those who had not (57.1% and 65.1%, respectively, on the full exam of 175 items). This difference was meaningful and significant ( $t(96)=4.91$ ,  $p<.001$ ). In keeping with standard procedures, these candidates were removed from subsequent analyses. The CKE 1 analysis proceeded with 128 candidates.

Owing to the modest number of candidates, all subsequent analyses were interpreted with caution.

## Post-Examination Survey

Candidates were provided with access to the post-examination survey immediately after submitting their responses to the CKE 1; 171 responses were obtained from candidates (response rate, 94%).

Table 2 shows the responses to the administration-related questions. Note that candidates were generally very positive about the administration experience. Table 3 shows the content-related questions; there was a tendency to more neutrality on these questions. The rating for perceived fairness (Question 14) warrants monitoring as it continues to be low.

Candidates were asked to express their opinion regarding whether completing the examination on a computer affected their performance. Table 4 shows that over half of candidates felt it made no difference, and where a preference was expressed it was for using a computer.

An open-ended question was also posed to candidates asking for any additional comments. Those comments were provided to HRPA for information and consideration. Nothing in the comments or survey data raised concerns about item analysis or scoring.

Table 2: Administration-related post-examination survey questions\*

	Question	SA	A	N	D	SD	Score	Agreement
1.	I was able to book a seat to write the examination at a time that was convenient for me.	92	45	11	16	7	4.2	80%
2.	I was well informed about what documents to bring to the exam location.	119	42	7	1	0	4.7	95%
3.	Proctors enforced the exam-day rules and the security procedures at the test centre were what I expected.	111	49	5	3	1	4.6	95%
4.	Proctors were professional and courteous.	119	43	6	2	0	4.7	95%
5.	The tutorial helped me understand how to complete the examination on the computer.	111	43	9	1	0	4.7	94%
6.	Navigation through the examination was easy and intuitive.	107	55	3	3	0	4.6	96%

\*Response categories: SA = strongly agree; A = agree; N = neutral; D = disagree; SD = strongly disagree.

Table 3: Content-related post-examination survey questions\*

	Question	SA	A	N	D	SD	Score	Agreement
7.	The time allotted for this examination was sufficient.	101	53	8	5	1	4.5	92%
8.	Information available prior to exam day provided me with adequate details about the content and format of the exam.	45	58	39	13	11	3.9	62%
9.	I feel I was adequately prepared to write this examination.	21	60	62	19	6	3.8	48%
10.	The questions in the examination were clearly written.	22	82	32	26	6	3.7	62%
11.	The terminology used in the examination was accurate.	29	89	36	12	2	4.0	70%
12.	The situations presented in the examination were realistic.	29	106	23	6	3	4.0	81%
13.	The questions in the examination reflected the examination blueprint.	19	71	57	14	4	3.9	55%
14.	The examination was a fair assessment of my ability.	13	61	54	31	8	3.6	44%

\*Response categories: SA = strongly agree; A = agree; N = neutral; D = disagree; SD = strongly disagree.

**Table 4: Preference regarding computer-based testing versus pencil-and-paper**

Question	Count	%
I feel that completing the examination on a computer improved my performance.	51	30%
I feel that completing the examination on a computer decreased my performance.	20	12%
I feel that completing the examination on a computer had no effect on my performance.	97	58%

## Initial Analysis

The full CKE 1 examination was 175 items, of which approximately 150 were to be scored. The other 20–30 items were not intended to be scored. Across the 2 new forms, 160 items were available for scoring on each, after removing items designated as experimental.

The initial analysis summary statistics are presented in Table 5.

**Table 5: Initial examination statistics – Combined across forms**

Index	Value
Items	160
Total candidates	182
Candidates in analysis	128
Mean score	106.1 (66.3%)
Score range	65–140 (40.6–87.5%)
Cronbach's alpha	.89
Mean $r_{pb}^*$	.21

Standard classical test theory analysis was conducted to identify the following:

1. Item difficulty (percent obtaining correct result,  $p$ )
2. Item discrimination (corrected point-biserials,  $r_{pb}^*$ )
3. Distractor quality (based primarily on distractor discrimination)

Wickett compiled these statistics, along with any comments made by candidates concerning specific items, to identify items that may have been keyed incorrectly or that were performing poorly. Most emphasis was placed on the corrected point-biserials as evidence of item quality, though difficulty was also factored in to avoid very easy or very hard items. Items were ranked from worst performing to best performing accordingly.

## Key Validation

Key validation was conducted via web meeting on June 24, 2019, using members of the CHRP Examination Validation Committee (EVC). The EVC (Table 6) was reminded of basic item and test analysis methods and was oriented to the main statistics used to evaluate the quality of the CKE 1.

Table 6: CHRP Examination Validation Committee members – Key validation

Member	Credential	Years of Relevant Experience	Joined EVC	Industry
✓ Sunday Ajao	CHRL	15–20	2017	Banking/finance
✓ Roxanne Chartrand	CHRL	20–29	2018	Insurance
Claire Chester	CHRL	10–15	2017	Health services
✓ Tanya Gopaul	CHRL	10–15	2017	Banking
✓ Jean Lazarus	CHRL	15–19	2017	Health services
Suman Seth	CHRL	15–19	2018	Government
Kriss Stone	CHRL	10–15	2017	Real estate
Ileean Tait	CHRL	15–20	2017	Environmental
Patricia Verkley	CHRL	10–15	2019	Not-for-profit
Karen Weiler	CHRL	20–29	2017	Software/ communications
Alyssa Young	CHRL	5–9	2017	Not-for-profit

✓ Participated in the session.

The group was informed that test reliability, as measured by Cronbach's alpha, was .89 based on the set of 160 potentially scored items and that this was above the generally accepted threshold of .80.

The group was walked through the flagged items one at a time, with the recommendation that the worst-performing items be removed from scoring, but the group was given less direction on items with borderline statistics. Where available, candidates' comments about the items were also shown. Because of the modest sample size for this administration, past item data were also used where available, and the group was directed not to rely unduly on statistics exclusively from the June administration.

The group made decisions based on content and the data through discussion; they removed the 10 items that they felt were inappropriate to retain for scoring. Panel members' comments about specific items were recorded for future item revision activities.

Not all remaining items were strong-performing, and several items were retained that were very easy or very hard or that had a low corrected point-biserial in this sample of candidates. Most

were moderate to strong items, however. The final alpha for the set of 150 scored items was .90. The difficulties ranged from 27.3% to 96.9%, with a mean of 67.4%. The  $r_{pb}^*$  values ranged from  $-.08$  to  $.56$ , with a mean of  $.22$ .

Table 7 presents the scored CKE 1's final fit to the examination blueprint. In all cases, the final number of scored items in a functional area fit within the established range.

The group endorsed the final set of items for use in scoring the June 2019 CKE 1 candidates who took this form.

Table 7: Final scored examination fit to blueprint

	Functional Area	Actual	Min.	Target*	Max.	Blueprint Range
10	Strategy	6	5	6	7	4% ± 1%
20	Professional Practice	17	14	17	19	11% ± 2%
30	Organizational Effectiveness	19	17	20	22	13% ± 2%
40	Workforce Planning & Talent Management	21	17	20	22	13% ± 2%
50	Labour & Employee Relations	17	14	17	19	11% ± 2%
60	Total Rewards	20	17	20	22	13% ± 2%
70	Learning & Development	19	17	20	22	13% ± 2%
80	Health, Wellness & Safe Workplace	16	14	17	19	11% ± 2%
90	HR Metrics, Reporting & Financial Management	15	14	17	19	11% ± 2%
	<b>Total</b>	<b>150</b>				

\*Adds to 154 due to rounding.

## Establishing the Pass Mark: Equating

Equating, as per Kolen and Brennan (2014),<sup>5</sup> was used to establish the pass mark for the June 2019 CKE 1. The goal of this process was to set a pass mark for the June 2019 CKE 1 that would be equivalent to that set for previous CKE 1 administrations; that is, to set a pass mark that would give each candidate the same probability of passing regardless of which form they took.

The passing standard for the CKE 1 was originally set after the November 2015 offering of the CKE 1 using the Modified Angoff method. General details on that method can be found in Appendix B. Specific information on the standard setting session is provided in the technical report issued for the November 2015 administration.

<sup>5</sup> Kolen, M.J., & Brennan, R.L. (2014). *Test equating, scaling, and linking*. New York, NY: Springer.

Three equating procedures were conducted back to different administrations (June 2018, October 2018, and February 2019). The third procedure (to October 2018) was conducted because of discrepancies between the 2 planned procedures. The intention following these 3 equating runs was to average them to arrive at a final pass mark for the June 2019 CKE 1. The 2 planned administrations were chosen because they were the most recent administration and the administration corresponding to the same administration month the previous year.

### Combined Results

The process and outcomes outlined above were presented to the CHRP EVC (Table 9) via teleconference on June 28, 2019. Committee members decided that the pass mark for June would be computed using the weighted mean of the values from all 3 equating runs. Weighting was by both number of candidates and number of anchor items, though the effect on integer pass mark as compared to a simple average was nil.

The committee expressed confidence in their decision and formally voted to recommend it to the Registrar. Using the established convention for this testing program, the weighted mean value was rounded up to a cut score of 94. The resulting pass rate of 65.6% for first-time candidates is close to the value seen in June 2018, and somewhat lower than that seen in October 2018; both results are as expected based on anchor performance. There was a drop in pass rate compared to the February 2019 administration, but that could be explained by sample fluctuation. The pass rate for all candidates in June 2019 was 56.6%. See Table 8 for historical pass rates.

Upon formal vote to recommend the approved pass mark to the Registrar, the Registrar accepted the committee's recommendation and the pass mark for June 2019 was formally established.

**Table 8: Historical pass rates**

	All	First-time
June 16	65.4%	69.1%
Nov. 16	58.8%	62.1%
Feb. 17	50.5%	62.5%
June 17	67.8%	75.5%
Oct. 17	59.2%	66.5%
Feb. 18	64.2%	70.4%
June 18	58.6%	66.2%
Oct. 18	67.0%	75.8%
Feb. 19	61.9%	72.5%
June 19	<b>56.6%</b>	<b>65.6%</b>

Table 9: CHRP Examination Validation Committee members – Pass mark approval

Member	Credential	Years of Relevant Experience	Joined EVC	Industry
Sunday Ajao	CHRL	15–20	2017	Banking/finance
Roxanne Chartrand	CHRL	20–29	2018	Insurance
✓ Claire Chester	CHRL	10–15	2017	Health services
Tanya Gopaul	CHRL	10–15	2017	Banking
✓ Jean Lazarus	CHRL	15–19	2017	Health services
✓ Suman Seth	CHRL	15–19	2018	Government
✓ Kriss Stone	CHRL	10–15	2017	Real estate
Ileean Tait	CHRL	15–20	2017	Environmental
Patricia Verkley	CHRL	10–15	2019	Not-for-profit
Karen Weiler	CHRL	20–29	2017	Software/ communications
Alyssa Young	CHRL	5–9	2017	Not-for-profit

✓ Participated in the session.

## Scoring

To finalize the scoring, repeat and outlier candidates who were not included in the item and form analysis were reinserted into the dataset. Scores for each of the 9 functional areas were also computed for each candidate. An Excel file with the final candidate results was provided to HRP.

Table 10 provides the means and standard deviations for the functional areas and for the total score, using all candidates who took the new June 2019 CKE 1 forms. Table 11 provides the correlations between all functional areas. Caution should be exercised in interpreting differences between correlations. Variation can be explained largely by the number of items making up each functional area score. That is, functional areas with fewer items on the exam have lower correlations with the other functional areas. Figure 3 shows the distribution of scores for all candidates, along with the pass mark.

Table 10: Total and functional area scores for all candidates

Functional Area	Percentage	Mean	SD*
<b>10 Strategy</b>	75%	4.5	1.1
<b>20 Professional Practice</b>	70%	11.9	2.5
<b>30 Organizational Effectiveness</b>	65%	12.4	3.0
<b>40 Workforce Planning &amp; Talent Management</b>	59%	12.3	3.4
<b>50 Labour &amp; Employee Relations</b>	65%	11.0	2.6
<b>60 Total Rewards</b>	61%	12.2	3.3
<b>70 Learning &amp; Development</b>	66%	12.5	3.1
<b>80 Health, Wellness &amp; Safe Workplace</b>	64%	10.3	2.3
<b>90 HR Metrics, Reporting &amp; Financial Management</b>	65%	9.8	2.1
<b>Total score</b>	<b>64.6%</b>	<b>96.9</b>	<b>17.7</b>

\*SD = standard deviation.

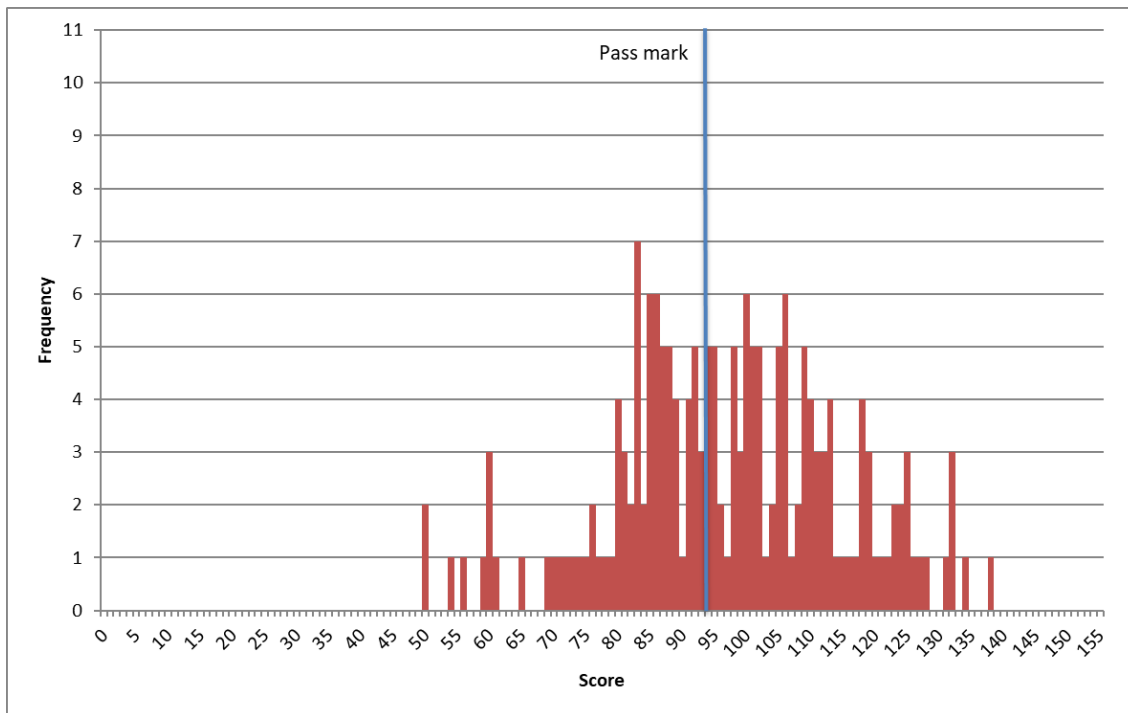
Table 11: Correlations between functional area scores for all candidates

Area*	10	20	30	40	50	60	70	80	90
<b>10</b>		.39	.43	.42	.45	.41	.47	.38	.35
<b>20</b>			.57	.54	.47	.51	.54	.55	.47
<b>30</b>				.59	.46	.50	.54	.46	.52
<b>40</b>					.46	.62	.65	.42	.56
<b>50</b>						.45	.49	.43	.47
<b>60</b>							.60	.46	.44
<b>70</b>								.52	.49
<b>80</b>									.39
<b>90</b>									

\*See Table 10 for the full name of each functional area.



Figure 3: Score distribution for all candidates



## Key Examination Metrics

Table 12 shows the key examination metrics for candidates included in the main analysis; that is, only first-time candidates, with outliers removed. Past metrics are provided for reference.

Table 12: Key examination metrics – Candidates included in analysis only

Index	June 2019	February 2019	October 2018	June 2018	February 2018
Scored items	150	155	155	150	150
Candidates	128	142	178	157	115
Mean	101.1 (67.4%)	112.1 (72.3%)	107.2 (69.1%)	102.0 (68.0%)	106.3 (70.9%)
Median	100.5 (67.0%)	114.5 (73.9%)	109 (70.3%)	103 (68.7%)	109 (72.7%)
Skewness	0.002	-0.876	-0.462	-0.403	-0.483
Kurtosis <sup>i</sup>	-0.446	0.673	0.097	0.208	-0.525
Range	60–138 (40.0– 92.0%)	55–142 (35.5– 91.6%)	60–141 (38.7– 91.0%)	53–136 (35.3– 90.7%)	61–136 (40.7– 90.7%)
Standard deviation	16.43	18.45	15.35	16.68	17.60
Cronbach's alpha	.90	.92	.88	.90	.92
Mean $r_{pb}$ *	.22	.26	.20	.23	.25
SEM <sup>ii</sup>	5.23	5.10	5.25	5.24	5.13
SEM at the pass mark	5.57	5.61	5.63	5.53	5.56
Decision consistency (uncorrected) <sup>iii</sup>	.86	.88	.89	.86	.92
Perceived fairness <sup>iv</sup>	42%	47%	46%	49%	43%
Pass mark	93.247	102.054	97.387	96.622	97.710
Effective pass mark	94	103	98	97	98
Pass rate	65.6%	72.5%	75.8%	66.2%	70.4%

<sup>i</sup>Excess

<sup>ii</sup>SEM = standard error of measurement.

<sup>iii</sup>Subkoviak method.

<sup>iv</sup>Based on responses to the post-examination survey. Value here may differ from that presented in main body of report because this value includes only candidates in the analysis.

## Related Development Activities

Since the last administration of the CKE 1 in February 2019, the following exam development activities have taken place.

### Item Validation

To provide sufficient items for upcoming administrations, a 2½-day validation session was held February 20–22, 2019, at HRPAs offices. The CHRP EVC members who participated are listed in Table 13 (one member was not available on the last day). To augment the EVC members available for this session, ad hoc members were added, as listed in Table 14 (one of the ad hoc members was unable to continue after day 1). This session involved the review of CHRP ELE items as well.

Table 13: CHRP Examination Validation Committee – Item validation

Member	Credential	Years of Relevant Experience	Joined EVC	Industry
Sunday Ajao	CHRL	15–20	2017	Banking/finance
✓ Roxanne Chartrand	CHRL	20–29	2018	Insurance
Claire Chester	CHRL	10–14	2017	Health services
Tanya Gopaul	CHRL	10–15	2017	Banking
✓ Jean Lazarus	CHRL	15–19	2017	Health services
Suman Seth	CHRL	15–19	2018	Government
Kriss Stone	CHRL	10–15	2017	Real estate
Ilelean Tait	CHRL	15–20	2017	Environmental
✓ Karen Weiler	CHRL	20–29	2017	Software/ communications
Alyssa Young	CHRL	5–9	2017	Not-for-profit

✓ Participated in the session.

Table 14: Ad hoc CHRP Examination Validation Committee members – Item validation

Member	Credential	Years of Relevant Experience	Industry
✓ Florence Aromolaran	CHRL	10–15	Not-for-profit
✓ Portia Daisy	CHRL	10–15	Education
✓ Kelly Gillis	CHRL	10–15	Healthcare
✓ Karen Pantaleo	CHRL	20–29	Consultant
✓ Patricia Verkley	CHRL	10–15	Not-for-profit

✓ Participated in the session.

The EVC members received advance materials outlining the following:

- Purpose of the session
- Description of the CHRP credential
- CKE 1 and CHRP ELE blueprints
- Criteria for good test items
- Validation process
- Relevant legislation

At the session, full training was provided to inform the ad hoc committee members of the expectations for the CHRP credential and the process used to validate items.

For each item, the committee was asked to either

- Validate the item for use in the next 2 years to make decisions about who would be certified as an HR professional in Ontario (at the CHRP level),
- Move the item to the CKE 2 or CHRP ELE bank,
- Revise the item to make it suitable for use, or
- Declare the item unsound and send it back for revision or removal from the bank.

The bulk of the session saw the committee members reviewing items independently and submitting their assessments in blocks of approximately 12–20 items. Those assessments were tabulated and any items that were not validated as is by the full committee were discussed until there was agreement on changes and the future use of the item.

The panel members reviewed and validated 57 items as suitable for the CKE 1, designated 1 item to be moved to the CKE 2 bank by re-assigning it to a competency code suitable for use only on the CKE 2, designated 0 items as suitable for one of the ELEs, and rejected 4 items as unfixable. Eleven of the 57 items were edited prior to being validated.

# Appendix A

## Blueprint

### Comprehensive Knowledge Examination 1

Human Resources Professionals Association  
Version 2.2

*Approved by CHRP Exam Validation Committee April 9, 2018*

*Approved by HRPA Registrar April 11, 2018*

*Effective June 2018*

### Credential

Passing the Comprehensive Knowledge Examination 1 is a requirement for certification for CHRP candidates. The examination reflects the *HRPA Professional HR Competency Framework* (2014).

### Purpose

The CKE 1 assesses whether a candidate has the level of discipline-specific knowledge necessary to practise human resources management at the CHRP level in a manner that is consistent with the protection of the public interest. Knowledge related exclusively to employment and workplace legislation is assessed on the CHRP Employment Law Examination.

### Structure

The structural variables provide high-level guidance as to what the examination will be like.

Table 15: CKE 1 Blueprint structural variables

Item types	Independent 4-option multiple choice
Length	175 items in total
	20–30 experimental items
Duration	Up to 3½ hours
Delivery mode	Computer-based testing in proctored test centres
Frequency	3 windows per year

### Content Weighting

The functional area weights were set in 2014 to reflect an equal importance across the functional areas, except with a lower expectation for Strategy. The weights were modified slightly in 2018 to remove weighting for competencies most appropriately tested on the CHRP

Employment Law Examination. Within each functional area, items are distributed roughly evenly across the related competencies.

Table 16: Functional area weights on the CKE 1

Functional Area		Weight	Range
10	Strategy	4%	+/- 1%
20	Professional Practice	11%	+/- 2%
30	Organizational Effectiveness	13%	+/- 2%
40	Workforce Planning & Talent Management	13%	+/- 2%
50	Labour & Employee Relations	11%	+/- 2%
60	Total Rewards	13%	+/- 2%
70	Learning & Development	13%	+/- 2%
80	Health, Wellness & Safe Workplace	11%	+/- 2%
90	Human Resources Metrics, Reporting & Financial Management	11%	+/- 2%

Table 17: Competencies not eligible on the CKE 1

FA	Comp	FA	Comp	FA	Comp	FA	Comp
10	C005	40	C084	70	C152	80	C177
	C007		C089		C155		C179
	C009		C113		C156		C187
	C011	C114	C158		C192		
	C012	50	C117		C159	90	C194
	C017		C123		C163		C195
20	C035		C125		C165		C196
	C036	60	C139		C166		C204
	C037		C141		C171		C205
	C041		C143		C172		C206
30	C050		C146		C173		C210
	C056		C175				
	C057						
	C065						

Minor amendments made November 20, 2018, by CHRP EVC, with approval of the Registrar.

# Appendix B

## MODIFIED ANGOFF METHOD

**WHAT IT IS** → The Modified Angoff method of setting cut scores is the most popular method used with high-stakes examinations. With this method, experts evaluate each item on a test for difficulty and judge how likely it is that someone who is borderline in performance will get each item correct. Borderline candidates have, by definition, just enough competence to be considered competent (e.g., to pass the test). Any candidate showing the same or a higher level of performance as a borderline candidate is thus a “passing” candidate, and any candidate showing performance below the level of a borderline candidate is a “failing” candidate. The method has been successfully defended in court as being a fair method of setting cut scores that are used to make high-stakes decisions about candidates.

**HOW IT'S DONE** → The Modified Angoff method typically requires 5 to 15 experts in the field and is facilitated by a psychometrician. There are many variations of the Modified Angoff method used in practice, but generally the process begins with detailed training on how to apply ratings, followed by development of a description of the borderline candidate. Once training is complete (including a calibration exercise to make sure all raters have fully grasped the method), ratings are applied individually by each rater and compiled by the psychometrician. Discrepancies across raters are identified and flagged for discussion. Raters then have an opportunity to discuss their ratings and to rerate any items if the new information is considered cause to do so. In some cases, the psychometrician will introduce data from previous administrations of the item to further refine judgments. Once all items have been rated, an average Angoff rating for the exam is calculated by simply taking the average of all item ratings. The result is the cut score for the exam as a whole.

**WHY IT'S USED** → The benefit of the Modified Angoff method is that the resulting cut scores set an objective hurdle for candidates. Candidates who demonstrate performance above the borderline level (as systematically established by experts) are considered to have sufficient competence, and those below that level are considered to have insufficient competence. The proportion of candidates deemed below or above the cut score is not arbitrary and depends only on the actual ability of those candidates. For examinations resulting in pass/fail decisions, the implication of this is that all candidates would pass if they all showed better than the minimal accepted level of competence (i.e., above the borderline), or they would all fail if they all showed less than the minimal accepted level of competence. What is important is whether each candidate scores above or below the cut score, with that cut score being set based on the actual difficulty of the test and the expected performance of candidates showing the lowest level of acceptable performance. Because of this, the Modified Angoff method fairly assesses individual candidates on their own merits.

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