

## Appendix C

### Examination Summary Statistics

The tables to follow provide basic trend information related to the quality of the Part I and Part II examinations. The terms used in the tables are described below.

**Reference Group:** The reference group is comprised of all students enrolled in schools with approval accreditation status who took the examination for the first time. Performance of the reference group establishes standards for all candidates taking the examination.

**Mean Score (No. and %):** The mean score is the average number or percentage of items answered correctly by members of the reference group. Ideally, the mean should fall between 60% and 70%.

**Standard Deviation:** The standard deviation provides a measure of spread in scores. The ideal standard deviation for a 100-item examination is 12

**Reliability KR<sub>20</sub>:** Reliability refers to accuracy of examination scores from one occasion to the next. Perfect reliability of examination scores produces a reliability coefficient of +1.00, but no set of scores is perfectly reliable. The higher the coefficient, the more reliable are the examination scores.

**Prophecy Formula:** The Spearman-Brown prophecy formula estimates the number of additional items needed to obtain a reliability (KR<sub>20</sub>) of +0.90. An underlying assumption is that quality of added items is similar to that of existing items.

**Minimal Passing Raw Score:** The minimal passing raw score is the lowest number of items that a candidate had to answer correctly to pass. The minimal passing raw score is always converted to the reported score of 75.

**Failure Rate:** The failure rate reported here is the percentage of the reference group who scored below the minimal passing score.

**Table C.1**  
**Trend Statistics for the Part I Examination**  
**Anatomic Sciences**

<b>TEST INFORMATION</b>	<b>July 1999</b>	<b>July 2000</b>	<b>July 2001</b>	<b>July 2002</b>	<b>July 2003</b>	<b>July 2004</b>	<b>July 2005</b>
Number in Group	3,690	3,548	3,538	3,650	4,012	3,291	2,601
Number of Test Items	100	99	100	100	93	100	99
Mean Score	63.8	68.9	66.6	71.0	64.1	65.6	63.8
Mean Percent (%)	63.8	69.6	66.6	71.0	68.9	65.6	64.4
Standard Deviation	10.8	10.7	10.0	11.9	10.3	11.5	10.7
Reliability KR <sub>20</sub>	0.86	0.86	0.84	0.88	0.85	0.87	0.85
Prophecy Formula	152	145	169	120	144	138	163
Minimum Passing Raw Score	45	50	48	50	47	48	50
Failure Rate (%)	3.7	4.0	3.2	4.0	4.9	5.7	10.1

**Table C.2**  
**Trend Statistics for the Part I Examination**  
**Biochemistry-Physiology**

<b>TEST INFORMATION</b>	<b>July 1999</b>	<b>July 2000</b>	<b>July 2001</b>	<b>July 2002</b>	<b>July 2003</b>	<b>July 2004</b>	<b>July 2005</b>
Number in Group	3,690	3,548	3,538	3,650	4,012	3,291	2,601
Number of Test Items	97	98	100	98	97	99	96
Mean Score	64.8	64.0	65.9	62.4	66.8	67.3	58.6
Mean Percent (%)	66.8	65.3	65.9	63.7	68.9	68.0	61.0
Standard Deviation	11.6	10.5	11.4	11.8	10.6	12.1	10.9
Reliability KR <sub>20</sub>	0.88	0.85	0.87	0.87	0.86	0.88	0.86
Prophecy Formula	124	159	136	128	146	126	147
Minimum Passing Raw Score	43	45	46	43	49	44	38
Failure Rate (%)	3.3	3.4	4.8	4.6	4.7	3.0	2.5

**Table C.3**  
**Trend Statistics for the Part I Examination**  
**Microbiology-Pathology**

<b>TEST INFORMATION</b>	<b>July 1999</b>	<b>July 2000</b>	<b>July 2001</b>	<b>July 2002</b>	<b>July 2003</b>	<b>July 2004</b>	<b>July 2005</b>
Number in Group	3,690	3,548	3,538	3,650	4,012	3,291	2,601
Number of Test Items	99	99	100	100	100	100	100
Mean Score	61.9	63.1	66.6	64.7	63.8	66.0	63.4
Mean Percent (%)	62.5	63.8	66.6	64.7	63.8	66.0	63.4
Standard Deviation	9.7	10.3	10.3	11.2	10.7	11.4	9.5
Reliability KR <sub>20</sub>	0.81	0.84	0.84	0.85	0.85	0.86	0.81
Prophecy Formula	207	169	178	155	164	147	216
Minimum Passing Raw Score	41	37	46	40	43	44	40
Failure Rate (%)	1.8	1.0	2.3	1.6	2.1	3.1	0.9

**Table C.4**  
**Trend Statistics for the Part I Examination**  
**Dental Anatomy and Occlusion**

<b>TEST INFORMATION</b>	<b>July 1999</b>	<b>July 2000</b>	<b>July 2001</b>	<b>July 2002</b>	<b>July 2003</b>	<b>July 2004</b>	<b>July 2005</b>
Number in Group	3,690	3,548	3,538	3,650	4,012	3,291	2,601
Number of Test Items	99	99	100	100	95	99	99
Mean Score	61.3	63.1	74.0	78.2	71.3	75.7	73.9
Mean Percent (%)	62.0	63.8	74.0	78.2	75.0	76.5	74.6
Standard Deviation	10.5	10.3	9.7	9.9	9.8	10.0	9.5
Reliability KR <sub>20</sub>	0.80	0.84	0.84	0.85	0.84	0.85	0.83
Prophecy Formula	173	169	174	158	158	157	178
Minimum Passing Raw Score	43	37	51	59	46	54	50
Failure Rate (%)	4.5	1.0	1.8	3.9	1.1	2.7	1.5