



Objective Tests 2013 Data Booklet



Biology Intermediate 1 2013

Section A

Number of persons in test: 5,975
 Average test score: 14.06
 Average facility value: 56.24
 Reliability 0.72

Item	Key	Content Area	Abilities	Fac	Disc	% Choosing Option			
						A	B	C	D
1	D	1 2 ii	KU	57	24	21	2	20	57*
2	D	1 2 i	KU	52	25	4	41	3	52*
3	B	1 2 ii	KU	62	13	17	62*	10	10
4	B	1 2 i	KU	48	28	20	48*	21	10
5	B	1 4 vi	KU	68	24	5	68*	3	24
6	C	1 3 ii	PS1	78	34	12	6	78*	4
7	A	1 3 ii	PS4	43	22	43*	19	14	24
8	A	1 3 ii	KU	60	22	60*	9	19	12
9	C	1 2 i	PS4	51	38	27	12	51*	10
10	D	3 1 i	KU	49	24	8	5	38	49*
11	B	3 1 i	PS4	58	25	4	58*	22	16
12	A	3 2 ii	KU	55	27	55*	14	25	5
13	D	3 2 ii	KU	53	24	14	12	20	53*
14	C	3 3 i	PS5	54	32	22	12	54*	13
15	A	3 3 i	KU	42	19	42*	13	27	17
16	C	3 3 i	PS1	65	21	14	2	65*	19
17	C	2 1 ii	KU	31	22	16	24	31*	27
18	B	2 2 ii	KU	73	32	12	73*	11	4
19	A	2 1 i	KU	51	26	51*	6	13	30
20	C	2 1 i	PS1	89	22	4	4	89*	4
21	B	2 3 ii	PS3	37	23	18	37*	29	16
22	D	2 3 ii	PS3	88	25	3	3	6	88*
23	B	2 3 ii	KU	45	27	18	45*	20	16
24	D	2 4 i	PS4	28	28	5	51	15	28*
25	B	2 4 iv	KU	70	34	13	70*	13	5



Biology Intermediate 2 2013

Section A

Number of persons in test: 7,968
 Average test score: 16.04
 Average facility value: 64.17
 Reliability: 0.78

Item	Key	Content Area	Abilities	Fac	Disc	% Choosing Option			
						A	B	C	D
1	B	1 c 1 i	KU	66	42	22	66*	6	6
2	A	1 c 1 iii	KU	61	30	61*	2	7	30
3	B	1 c 1 iii	PS3	56	33	14	56*	27	3
4	D	1 d 1 iii	KU	72	38	4	18	6	72*
5	D	1 d 2 i	KU	41	32	7	44	8	41*
6	C	1 d 2 ii	PS5	66	28	13	12	66*	9
7	B	1 d 2 ii	PS4	60	43	16	60*	20	5
8	B	1 e 2 i	PS3	24	30	1	24*	71	4
9	D	2 a 1 i	KU	84	28	4	9	3	84*
10	A	2 a 1 i	PS6	66	29	66*	20	11	3
11	D	2 a 1 ii	KU	79	34	4	4	13	79*
12	A	2 a 1 ii	KU	70	28	70*	3	4	22
13	A	2 b 1 ii	KU	86	28	86*	7	1	6
14	D	2 b 1 i	PS6	75	28	6	4	14	75*
15	C	2 a 2 ii	PS7	72	16	3	11	72*	13
16	B	2 b 2 ix	KU	61	40	26	61*	4	10
17	C	2 b 2 xiii	KU	59	39	16	12	59*	13
18	C	3 a 1 i	PS1	59	29	9	13	59*	19
19	A	3 a 1 iv	PS4	56	47	56*	9	22	13
20	D	3 a 1 iii	PS3	93	19	2	3	2	93*
21	C	3 b iv	KU	49	33	21	19	49*	10
22	D	3 a 2 i	KU	19	9	40	15	25	19*
23	C	3 c 2 i	KU	67	30	2	16	67*	14
24	A	3 d 1 i	KU	81	28	81*	3	1	15
25	B	3 d 2 i	KU	80	32	10	80*	4	6



Biology Higher 2013

Section A

Number of persons in test: 9,979
 Average test score: 21.58
 Average facility value: 71.95
 Reliability: 0.77

Item	Key	Content Area	Abilities	Fac	Disc	% Choosing Option			
						A	B	C	D
1	A	1 a ii	KU	93	15	93*	5	1	1
2	B	1 a ii	PS6	72	37	17	72*	6	5
3	D	1 b 2 ii	PS6	31	77	15	3	16	66*
4	A	1 c ii	KU	86	28	86*	1	10	3
5	D	1 c iv	KU	52	22	31	4	13	52*
6	B	1 c iv	PS3	76	35	2	76*	16	6
7	D	1 d ii	PS3	87	30	4	4	4	87*
8	A	1 d iii	KU	72	40	72*	6	19	3
9	B	1 d iv	KU	77	24	11	77*	9	2
10	D	1 e ii	KU	78	40	3	7	12	78*
11	C	2 a 1 iii	KU	36	76	7	32	52*	8
12	C	2 a 3 i	KU	89	18	8	1	89*	2
13	C	2 b 1 v	KU	74	32	13	9	74*	3
14	D	2 b 1 v	KU	65	35	19	10	6	65*
15	A	2 c 1 i	PS3	70	26	70*	14	15	1
16	B	2 c 1 aii	KU	25	77	18	71*	5	6
17	C	2 c 1 ii	KU	26	77	12	5	74*	8
18	A	2 c 2 ii	PS7	21	77	76*	11	2	10
19	C	2 c 2 iv	PS1	39	76	6	21	71*	2
20	D	2 a 3 vi	KU	17	77	9	27	2	62*
21	D	3 a 1 i	KU	77	31	10	6	7	77*
22	B	3 a 1 iii	KU	17	77	2	94*	2	1
23	A	3 c i	KU	68	32	68*	15	7	9
24	C	3 a 4 i	PS4	77	18	7	8	77*	7
25	B	3 a 4 i	PS6	28	35	19	28*	6	46
26	A	3 a 4 ii	KU	22	77	50*	6	43	1
27	B	3 a 4 iii	PS1	20	77	19	54*	13	14
28	C	3 a 4 iv	PS1	22	77	5	4	91*	1
29	B	3 b iv	KU	71	33	23	71*	2	4
30	C	3 c ii	KU	84	30	7	5	84*	4



Biology (Revised) Higher 2013

Section A

Number of persons in test: 164
 Average test score: 21.37
 Average facility value: 71.24
 Reliability: 0.8

Item	Key	Content Area	Abilities	Fac	Disc	% Choosing Option			
						A	B	C	D
1	B	1 1 b ii	KU	93	21	2	93*	4	1
2	C	1 2 c	KU	84	36	12	2	84*	2
3	C	1 2 c i	PS1	56	34	17	12	56*	15
4	A	1 3 c iii	KU	64	34	64*	7	22	7
5	C	1 3 b ii	KU	88	14	1	5	88*	7
6	D	1 3 b iii	KU	60	11	5	7	27	60*
7	B	1 3 c	PS6	73	35	4	73*	9	13
8	C	1 3 c ii	PS3	70	20	7	7	70*	16
9	C	1 3 c ii	KU	63	49	12	18	63*	7
10	A	1 3 d	KU	86	28	86*	3	2	9
11	B	2 3 a ii	PS1	55	35	10	55*	10	23
12	D	2 1 c iii	KU	82	23	5	8	4	82*
13	B	2 2 b	KU	95	21	1	95*	4	1
14	C	2 1 a i/ii	KU	66	46	21	9	66*	4
15	B	2 2 b	KU	79	32	18	79*	1	2
16	C	2 2 c i	KU	87	40	5	1	87*	7
17	A	2 3 b ii	KU	65	33	65*	16	18	1
18	B	2 3 a ii	PS3	51	44	33	51*	7	9
19	D	2 3 b ii	PS6	63	48	13	10	14	63*
20	A	3 1 e/2 b	PS6	67	16	67*	26	5	2
21	D	2 3 b i	KU	43	27	19	15	23	43*
22	B	3 1 b i	KU	59	16	2	59*	7	32
23	A	3 1 c i	KU	81	36	81*	16	2	0
24	D	3 1 c iii	KU	84	33	7	4	5	84*
25	A	3 3 b ii	KU	60	39	60*	7	23	9
26	A	3 3 c iii	PS3	45	47	45*	39	9	7
27	C	3 3 c i	KU	90	19	6	2	90*	2
28	D	3 2 b	KU	77	19	18	3	1	77*
29	D	3 1 a ii	PS1	77	41	4	4	15	77*
30	B	3 2 b ii	PS7	77	23	3	77*	12	8



Biology Advanced Higher 2013

Section A

Number of persons in test: 2,446
 Average test score: 19.06
 Average facility value: 76.25
 Reliability: 0.73

Item	Key	Content Area	Abilities	Fac	Disc	% Choosing Option			
						A	B	C	D
1	A	1 a i	KU	92	25	92*	5	1	2
2	C	1 a ii	PS3	84	31	4	6	84*	6
3	D	1 a ii	KU	91	25	2	2	5	91*
4	B	1 b i	KU	88	33	4	88*	1	7
5	B	1 b i	KU	81	34	4	81*	10	5
6	A	1 c ii	KU	82	34	82*	2	16	1
7	B	1 c ii	PS3	86	26	5	86*	3	6
8	A	1 b iv	KU	89	32	89*	6	2	2
9	C	1 d i	KU	77	27	7	8	77*	8
10	C	1 d i	PS	32	21	2	4	32*	61
11	C	1 c i	KU	65	38	10	13	65*	12
12	D	1 c i	PS3	76	30	7	10	7	76*
13	D	2 a 1 ii	KU	59	16	1	36	4	59*
14	A	2 a 1 i	PS3	54	19	54*	17	5	23
15	B	2 a 2 i	PS6	55	14	34	55*	7	3
16	D	2 a 2 ii	KU	74	38	14	6	6	74*
17	A	2 a 2 ii	PS6	82	31	82*	10	5	4
18	C	2 b 1 iii	KU	84	27	4	6	84*	6
19	A	2 b 1	KU	88	20	88*	3	7	1
20	D	2 c iii	KU	88	32	5	5	2	88*
21	C	2 c iii	KU	92	29	2	3	92*	2
22	D	2 b 1	PS5	93	18	2	1	4	93*
23	B	2 b 1	PS6	71	19	6	71*	6	16
24	B	2 c iv	KU	51	35	3	51*	6	39
25	D	2 c i	KU	74	27	3	20	3	74*



Biology (Revised) Advanced Higher 2013

Section A

Number of persons in test: 12
 Average test score: 19.17
 Average facility value: 76.67
 Reliability: 0.49

Item	Key	Content Area	Abilities	Fac	Disc	% Choosing Option			
						A	B	C	D
1	D	1 2 b ii	KU	75	36	8	17	0	75*
2	A	1 2 b iv	KU	100	0	100*	0	0	0
3	A	2 b iv	PS5	67	23	67*	8	0	25
4	C	1 2 b v	KU	83	12	0	0	83*	17
5	C	1 1 c	PS	25	45	25	33	25*	17
6	A	1 2 e iii	KU	92	16	92*	0	8	0
7	D	1 2 d i	KU	75	2	0	25	0	75*
8	B	1 2 c iii	KU	58	-1	33	58*	8	0
9	A	1 2 c iii	KU	92	28	92*	8	0	0
10	B	1 2 c iii	PS3	58	-1	33	58*	0	8
11	D	1 2 e iii	KU	92	28	0	0	8	92*
12	B	1 2 f iii	KU	100	0	0	100*	0	0
13	D	1 2 f	KU	100	0	0	0	0	100*
14	D	2 1 c	KU	92	28	8	0	0	92*
15	B	2 1 e	PS1	67	23	0	67*	8	25
16	A	2 2 a i	KU	83	16	83*	17	0	0
17	C	2 2 a ii	KU	100	0	0	0	100*	0
18	C	2 2 b i	KU	42	-5	0	50	42*	8
19	C	2 b ii	PS	42	16	8	25	42*	25
20	A	2 2 b ii	PS6	100	0	100	0	0	0
21	C	2 2 c i	KU	75	45	0	8	75*	17
22	B	2 2 d ii/vi	KU	92	-9	0	92*	0	8
23	D	2 2 d iv	KU	92	16	0	8	0	92*
24	C	3 1 c	KU	83	6	0	17	83*	0
25	A	3 3 d	PS6	33	20	33*	0	33	25



Biotechnology Intermediate 2 2013

Section A

Number of persons in test: 87
 Average test score: 16.38
 Average facility value: 65.52
 Reliability: 0.75

Item	Key	Content Area	Abilities	Fac	Disc	% Choosing Option			
						A	B	C	D
1	A	1 a i	KU	79	24	79*	2	18	0
2	D	1 a v	KU	44	35	24	14	18	44*
3	C	2 a iv	KU	89	23	0	0	89*	11
4	D	2 a iii	PS	69	19	10	6	15	69*
5	A	1 a v	PS	52	21	52*	15	11	21
6	C	1 b iv	KU	72	32	15	8	72*	5
7	B	2 a v	PS	98	9	1	98*	1	0
8	A	1 a iv	KU	70	45	70*	3	18	8
9	B	1 b i	PS	57	19	25	57*	11	6
10	C	1 a iii	KU	59	30	16	17	59*	8
11	C	1 c i	KU	69	43	15	9	69*	7
12	B	1 b iii	KU	44	7	10	44*	5	41
13	D	1 b v	KU	55	49	7	15	23	55*
14	C	3 a i	PS	20	19	14	28	20*	39
15	A	3 b ii	KU	82	41	82*	6	6	7
16	A	3 d iii	KU	72	19	72*	11	15	0
17	B	3 c ii	PS	71	26	23	71*	3	2
18	C	3 c ii	KU	49	27	21	14	49*	16
19	D	3 d iii	KU	85	35	10	2	2	85*
20	B	1 c ii	KU	57	38	10	57*	16	16
21	B	3 b i	KU	74	10	16	74*	5	6
22	A	3 e	KU	74	35	74*	5	8	14
23	D	3 b i	PS	70	44	0	8	22	70*
24	C	3 b i	PS	90	9	1	2	90*	7
25	B	1 b ii	PS	38	40	16	38*	3	43



Biotechnology Higher 2013

Section A

Number of persons in test: 21
 Average test score: 23.14
 Average facility value: 77.14
 Reliability: 0.70

Item	Key	Content Area	Abilities	Fac	Disc	% Choosing Option			
						A	B	C	D
1	B	1 b 3 iv	KU	90	30	0	90*	5	5
2	D	1 b 1 ii	KU	95	20	0	5	0	95*
3	C	1 b 1 iv	KU	76	-3	0	0	76*	24
4	A	1 b 1 iii	KU	90	11	90*	5	5	0
5	D	1 b 2 ii	PS3	90	49	0	0	5	90*
6	C	1 d i ii	KU	90	20	0	5	90*	5
7	B	1 c i	PS3	62	26	5	62*	33	0
8	A	1 c i	KU	90	49	90*	10	0	0
9	D	1 c ii	KU	86	55	0	10	5	86*
10	A	1 d iii	KU	00	0	100*	0	0	0
11	D	1 b 2 i	PS3	38	28	29	0	33	38*
12	B	2 a 1 ii	KU	95	7	0	95*	0	5
13	C	2 a 2 i	PS1	71	29	14	14	71*	0
14	D	2 a 2 v	KU	81	32	19	0	0	81*
15	B	3 a 1 ii	PS3	62	29	0	62*	33	5
16	D	1 b 2 i	PS4	81	25	5	0	14	81*
17	B	2 b 2 iii	KU	62	53	0	62*	29	10
18	A	2 a 2 i	PS4	81	15	81*	5	14	0
19	D	3 a 1 i	PS3	62	44	24	5	10	62*
20	B	3 b 2 iv	KU	90	30	0	90*	5	5
21	C	3 a 1 iii	KU	90	7	5	0	90*	5
22	A	2 a 2 ii	PS6	81	18	81*	0	10	5
23	B	2 a 2 ii	PS3	48	6	43	48*	10	0
24	C	3 a 1 ii	KU	90	-7	10	0	90*	0
25	A	3 a 1 ii	KU	24	11	24*	5	29	43
26	C	3 a 6 iii	KU	86	7	14	0	86*	0
27	C	3 a 6 i	KU	76	0	19	5	76*	0
28	C	3 a 5 i	KU	48	28	24	5	48*	24
29	A	3 b 3 i	KU	86	30	86*	10	5	0
30	D	3 b 2 v	PS1	90	39	5	5	0	90*



Chemistry Intermediate 1 2013

Section A

Number of persons in test: 2,943
Average test score: 12.52
Average facility value: 62.61
Reliability: 0.67

Item	Key	Content Area	Abilities	Fac	Disc	% Choosing Option			
						A	B	C	D
1	D	1 a	KU	65	21	4	14	17	65*
2	A	1 a	PS	55	24	55*	28	4	13
3	A	1 b	KU	57	24	57*	4	20	19
4	C	1 b	PS	62	28	27	6	62*	4
5	D	1 c	PS	38	17	20	29	13	38*
6	B	1 c	PS	36	33	8	36*	41	14
7	D	1 d	PS	69	22	8	11	11	69*
8	C	1 d	KU	62	22	15	19	62*	4
9	C	2 a	PS	67	19	22	7	67*	3
10	B	2 a	KU	75	25	11	75*	4	10
11	B	2 b	PS	90	22	7	90*	2	1
12	D	2 c	KU	72	25	7	6	14	72*
13	A	2 c	KU	51	26	51*	30	13	6
14	A	2 c	KU	45	16	45*	6	13	37
15	C	2 d	PS	54	32	22	11	54*	12
16	B	3 a	KU	86	26	1	86*	2	10
17	C	3 a	KU	61	37	28	6	61*	4
18	D	3 a	KU	75	22	9	8	6	75*
19	B	3 a	KU	62	27	15	62*	10	12
20	A	3 b	PS	69	27	69*	9	6	15



Chemistry Intermediate 2 2013

Section A

Number of persons in test: 4,625
 Average test score: 20.52
 Average facility value: 68.39
 Reliability: 0.84

Label	Key	Content Area	Abilities	Fac	Disc	% Choosing Option			
						A	B	C	D
1	B	1 a	KU	93	10	1	93*	3	3
2	A	1 a	PS (c)	83	30	83*	2	7	7
3	B	1 a	PS (c)	69	36	2	69*	26	3
4	B	1 b	KU	79	28	5	79*	11	5
5	C	1 c	PS (c)	92	27	1	2	92*	5
6	A	1 d	PS (c)	77	44	77*	5	3	15
7	B	1 e	PS (c)	39	46	4	39*	2	55
8	A	1 e	PS (b)	64	34	64*	6	29	1
9	D	1 f	PS (b)	82	34	4	9	5	82*
10	C	2 b	PS (c)	90	28	4	4	90*	2
11	C	2 a	PS (c)	46	42	2	1	46*	50
12	C	2 b/2 c	PS (c)	68	46	8	21	68*	3
13	B	2 c	KU	84	22	3	84*	5	8
14	C	2 c	PS (c)	61	52	17	5	61*	16
15	B	2 d	PS (c)	78	42	7	78*	10	5
16	B	2 d	KU	68	27	21	68*	2	9
17	D	2 e	PS (c)	68	39	22	5	5	68*
18	C	3 a	KU	83	36	6	3	83*	8
19	D	2 e	KU	65	44	11	17	7	65*
20	A	3 a	KU	78	34	78*	10	9	4
21	C	3 a	KU	60	42	18	17	60*	5
22	A	3 b	KU	59	37	59*	24	9	8
23	D	3 a	PS (c)	40	27	3	14	42	40*
24	A	3 b	KU	42	34	42*	15	16	28
25	D	3 b	PS (d)	82	25	2	4	12	82*
26	D	3 c	PS (c)	60	39	7	22	10	60*
27	A	3 c	PS (a)	68	43	68*	5	25	2
28	A	3 c	PS (c)	74	28	74*	6	18	2
29	B	3 c	KU	45	23	27	45*	12	16
30	D	3	PS (a)	58	39	16	13	13	58*



Chemistry Higher 2013

Section A

Number of persons in test: 9,971
 Average test score: 26.09
 Average facility value: 65.22
 Reliability: 0.86

Label	Key	Content Area	Abilities	Fac	Disc	% Choosing Option			
						A	B	C	D
1	A	Standard Grade	KU	84	35	84*	2	5	8
2	C	Standard Grade	PS	60	42	5	9	60*	25
3	B	Standard Grade	KU	35	39	17	35*	36	11
4	B	Standard Grade	PS	62	29	18	62*	10	9
5	D	1 a i	PS	62	38	5	24	9	62*
6	A	1 a ii	KU	69	27	69*	7	9	15
7	D	1 a iii	PS	37	22	10	41	12	37*
8	C	1 a iv	KU	66	32	8	10	66*	16
9	B	1 b i	KU	43	24	45	43*	10	2
10	A	1 b ii	PS	81	43	81*	12	4	2
11	B	1 c	KU	74	38	9	74*	7	10
12	C	1 c	PS	59	38	8	13	59*	19
13	D	1 d i	PS	69	30	3	15	13	69*
14	C	1 d ii	PS	50	33	10	28	50*	13
15	D	1 d iii	PS	63	43	12	11	14	63*
16	D	1 d iv	PS	36	22	10	4	49	36*
17	A	1 e i	PS	50	44	50*	22	17	11
18	A	1 e iii	KU	70	27	70*	14	12	3
19	C	2 a i	KU	71	39	10	9	71*	10
20	B	2 b i	PS	57	41	13	57*	17	12
21	D	2 b ii	KU	82	39	6	5	6	82*
22	B	2 b iii	KU	73	36	4	73*	18	5
23	D	2 b iv	PS	48	32	16	14	22	48*
24	B	2 c i	KU	79	36	6	79*	12	2
25	C	2 c ii	KU	68	46	15	8	68*	9
26	A	2 c iii	KU	70	33	70*	14	13	3
27	D	2 e i	KU	65	38	19	11	4	65*
28	B	2 e i	KU	71	30	12	71*	4	13
29	A	2 f i	KU	83	27	83*	16	1	0
30	A	2 f ii	PS	36	45	36*	14	34	14
31	C	3 a	PS	83	21	9	4	83*	5
32	A	3 b	PS	83	30	83*	8	4	5
33	A	3 c i	PS	82	25	82*	5	9	5
34	C	3 c ii	KU	68	41	17	5	68*	10
35	D	3 d i	PS	65	34	9	18	8	65*
36	C	3 d i	PS	81	32	9	3	81*	7
37	D	3 d ii	PS	62	40	27	7	4	62*
38	B	3 e iii	KU	63	34	12	63*	16	8
39	B	3 f i	PS	74	37	11	74*	6	9
40	C	3 f iii	KU	76	35	7	10	76*	7



Chemistry (Revised) Higher 2013

Section A

Number of persons in test: 649
 Average test score: 22.33
 Average facility value: 74.44
 Reliability: 0.81

Item	Key	Content Area	Abilities	Fac	Disc	% Choosing Option			
						A	B	C	D
1	B	PPP 1(d)	KU	88	31	6	88*	4	2
2	D	PPP 1(b)	KU	76	43	9	5	10	76*
3	C	PPP 1(c)	KU	71	32	7	11	71*	10
4	C	PPP 1(e)	KU	49	37	6	37	49*	8
5	D	PPP 2(b)	KU	76	29	3	11	9	76*
6	D	PPP 2(e)	KU	58	35	13	2	27	58*
7	A	PPP 3(a)	KU	84	30	84*	2	14	1
8	C	CC 1(a)	KU	85	34	5	7	85*	3
9	D	CC 2(a)	KU	87	38	6	3	4	87*
10	B	CC 3(a)	KU	84	29	1	84*	11	3
11	A	CC 3(b)	KU	86	32	86*	6	6	2
12	C	CC 4(b)	KU	91	28	0	1	91*	8
13	D	CC 5(d)	KU	65	44	7	21	5	65*
14	C	CC 6(a)	KU	80	38	5	6	80*	9
15	A	CC 6(b)	KU	93	29	93*	2	2	4
16	C	CC 7(a)	KU	76	43	11	7	76*	5
17	B	CC 7(b)	KU	70	43	6	70*	17	6
18	C	CC 8(a)	KU	61	28	10	13	61*	16
19	B	CC 9(b)	KU	88	23	9	88*	2	1
20	A	PtoP 1(b)	KU	58	39	58*	14	16	10
21	A	PtoP 1(b)	KU	76	24	76*	14	8	2
22	D	PtoP 1(d)	KU	91	25	5	2	3	91*
23	C	PtoP 1(e)	KU	67	38	19	6	67*	8
24	B	PtoP 1(f)	KU	53	25	15	53*	12	20
25	A	PtoP 2(a)	KU	68	29	68*	6	9	17
26	B	PtoP 2(b)	KU	57	30	33	57*	8	2
27	A	PtoP 3(b)	KU	77	46	77*	15	4	4
28	A	PtoP 3(c)	KU	78	31	78*	8	8	6
29	B	RC	Skills	53	9	0	53*	36	11
30	D	RC	Skills	85	19	4	2	9	85*



Chemistry Advanced Higher 2013

Section A

Number of persons in test: 2,522
 Average test score: 28.02
 Average facility value: 70.04
 Reliability: 0.82

Item	Key	Content	Area	Abilities	Fac	Disc	% Choosing Option			
							A	B	C	D
1	C	1 a ii		KU	90	18	2	4	90*	3
2	B	1 a i		KU	77	25	12	77*	4	7
3	A	1 a i		PS	74	25	74*	11	4	11
4	D	1 a i/2 b iii		PS	62	19	14	9	15	62*
5	D	1 a ii		KU	70	26	15	1	14	70*
6	A	1 a ii		KU	62	28	62*	9	20	9
7	C	1 a iii		PS	60	34	25	7	60*	8
8	A	1 b i		KU	61	38	61*	7	20	12
9	C	1 b i		KU	78	32	11	4	78*	7
10	B	1 b i		PS	79	36	9	79*	6	5
11	C	1 b ii		PS	63	32	25	4	63*	7
12	C	1 b iii		KU	82	21	6	7	82*	4
13	D	1 c i		PS	76	35	4	8	11	76*
14	B	1 c ii		KU	69	34	12	69*	9	10
15	A	2 a		PS	51	38	51*	36	4	8
16	C	2 a		PS	46	32	18	30	46*	5
17	B	2 a		PS	54	37	8	54*	8	29
18	C	2 b i		PS	80	31	0	11	80*	9
19	A	2 b ii		KU	91	28	91*	3	1	5
20	D	2 b ii		PS	85	30	13	1	1	85*
21	B	2 b iii		PS	72	26	8	72*	10	10
22	D	2 b iii		PS	71	25	3	9	16	71*
23	A	2 b iii		PS	81	32	81*	12	5	2
24	B	2 c i/Higher		KU	76	24	4	76*	9	11
25	B	2 c ii		PC	46	30	26	46*	16	11
26	C	2 c ii		PS	51	12	45	2	51*	2
27	B	2 d i		PS	87	19	4	87*	4	5
28	D	2 d i		PS	57	29	8	10	25	57*
29	D	3 a i		KU	82	37	7	4	8	82*
30	A	3 a i		PS	87	32	87*	7	2	5
31	D	3 a ii		KU	79	28	4	5	13	79*
32	A	3 a ii		KU	93	25	93*	2	2	2
33	B	3 a iii		KU	77	39	6	77*	10	7
34	D	3 b ii		KU	79	32	5	5	11	79*
35	D	3 b ii		PS	61	37	12	14	13	61*
36	C	3 b iv		KU	63	37	9	11	63*	16
37	D	3 b iv		PS	28	31	30	32	10	28*
38	B	3 b v		KU	61	34	21	61*	16	2
39	A	3 b v		PS	50	31	50*	31	14	6
40	D	3 e		KU	93	18	3	3	1	93*



Chemistry (Revised) Advanced Higher 2013

Section A

Number of persons in test: 103
 Average test score: 21.48
 Average facility value: 71.59
 Reliability: 0.75

Item	Key	Content Area	Abilities	Fac	Disc	% Choosing Option			
						A	B	C	D
1	C	Inorganic 2d	KUa	88	22	4	3	88*	5
2	B	Inorganic 1a	KUa	75	21	17	75*	2	7
3	A	Inorganic 1a	KUb	75	19	75*	11	7	8
4	D	Inorganic 1a	KUb	69	17	11	4	17	69*
5	A	Inorganic 2b	KUa	81	27	81*	8	10	2
6	A	Inorganic 2b	KUb	56	23	56*	11	26	7
7	C	Inorganic 1d	KUa	65	26	19	6	65*	10
8	B	Inorganic 3	KUb	72	21	11	72*	11	7
9	C	Inorganic 3	KUb	69	19	18	3	69*	10
10	B	Inorganic 4b	KUb	71	13	8	71*	11	10
11	A	RC	Skills	50	38	50*	35	6	9
12	B	RC	Skills	58	55	2	58*	10	30
13	C	Physical 1e	KUb	83	38	0	10	83*	8
14	A	Physical 1a	KUb	90	38	90*	0	4	6
15	D	Physical 1a	KUb	83	36	15	1	2	83*
16	C	Physical 1c	KUb	70	32	8	9	70*	14
17	D	Physical 1e	KUc	74	12	2	11	14	74*
18	A	Physical 1i	Skills	71	22	71*	22	5	2
19	B	Physical 2c	KUa	66	28	19	66*	8	7
20	D	Physical 2b	KUb	47	20	10	14	30	47*
21	C	RC	KUb	85	14	7	7	85*	1
22	D	Organic 3k	KUb	87	38	3	5	5	87*
23	A	Organic 3n	KUb	84	24	84*	9	1	6
24	D	Organic 3i	KUb	73	25	7	7	14	73*
25	B	Organic 3f	KUb	81	35	5	81*	8	7
26	D	Organic 3g	Skills	62	26	13	14	11	62*
27	C	Organic 3m	KUa	63	32	1	24	63*	12
28	A	Organic 3n	KUb	56	21	56*	22	12	10
29	D	Organic 6b	KUa	94	19	5	0	1	94*
30	D	Organic 3j	Skills	50	39	27	14	9	50*



Human Biology Higher 2013

Section A

Number of persons in test: 4,111
 Average test score: 20.39
 Average facility value: 67.96
 Reliability: 0.73

Item	Key	Content	Area	Abilities	Fac	Disc	% Choosing Option			
							A	B	C	D
1	A	1 b 1 ii		KU	98	16	98*	1	0	1
2	B	1 b 1 i		KU	64	29	11	64*	7	17
3	D	1 b 2 i		PS3	85	32	5	4	6	85*
4	D	1 b 2 ii		KU	66	19	12	15	7	66*
5	B	1 f 2 i		PS6	74	23	12	74*	5	9
6	A	1 f 2 ii		KU	75	24	75*	2	19	4
7	A	1 f 2 v		KU	55	31	55*	12	14	18
8	B	1 f3 i		PS6	82	26	10	82*	3	5
9	C	2 a ii		KU	70	23	18	5	70*	6
10	D	2 a ii		KU	68	36	6	6	20	68*
11	C	2 a iii		KU	62	22	33	3	62*	2
12	C	2 b i		KU	66	32	10	7	66*	17
13	C	2 b i		KU	30	10	56	8	30*	6
14	B	2 b i		PS1	54	19	20	54*	17	9
15	B	2 c iii		KU	57	26	9	57*	27	6
16	D	2 c iii		KU	70	30	4	3	23	70*
17	A	2 c i		PS3	65	17	65*	3	8	23
18	B	2 e ii		PS3	77	37	2	77*	15	5
19	C	3 a i		PS3	55	29	8	18	55*	19
20	A	3 b i		KU	78	6	78*	1	16	5
21	B	3 a ii		KU	78	30	13	78*	3	6
22	A	3 a iii		KU	81	24	81*	17	2	0
23	B	3 b 1 iii		KU	77	21	9	77*	9	5
24	D	3 b 1 iv		PS1	64	31	2	29	5	64*
25	D	3 b 2 iv		KU	90	19	2	6	2	90*
26	C	3 c 1 i		PS1	59	19	18	13	59*	9
27	D	3 c 3 iii		PS3	59	30	19	11	11	59*
28	C	3 c 3 i		PS4	70	23	13	11	70*	5
29	D	3 c 3 ii		KU	27	31	26	38	8	27*
30	A	3 c 2 i		KU	82	20	82*	7	8	3



Human Biology (Revised) Higher 2013

Section A

Number of persons in test: 139
 Average test score: 18.58
 Average facility value: 61.92
 Reliability: 0.79

Item	Key	Content Area	Abilities	Fac	Disc	% Choosing Option			
						A	B	C	D
1	C	1 2 a i	KU	80	35	5	3	80*	12
2	D	1 2 a i	PS3	77	33	8	7	7	77*
3	D	1 2 a iii	KU	70	14	14	7	9	70*
4	A	1 2 b iv	KU	54	39	54*	17	21	8
5	A	1 2 c ii	KU	51	24	51*	13	16	20
6	B	1 2 c ii	KU	59	20	14	59*	20	6
7	A	1 3 a i	KU	55	51	55*	13	21	12
8	D	1 3 b ii	KU	53	37	17	18	12	53*
9	A	1 3 b ii	KU	50	23	50*	24	10	17
10	C	1 2 d i	PS3	68	17	24	4	68*	2
11	C	2 1 b iii	KU	76	25	12	6	76*	6
12	D	2 1 b iii	KU	63	39	6	4	27	63*
13	D	2 1 d i	KU	76	30	14	5	4	76*
14	B	2 1 d i	PS1	58	18	17	58*	15	9
15	C	2 1 c iii	KU	63	19	13	16	63*	9
16	B	2 1 d ii	PS6	73	24	13	73*	5	9
17	B	2 2 c iv	PS1	27	36	29	27*	14	29
18	B	2 1 c ii	KU	49	37	19	49*	19	12
19	C	2 2 a	KU	38	10	40	12	38*	11
20	D	2 2 b ii	KU	73	32	3	2	22	73*
21	C	2 2 b i	PS3	47	29	4	48	47*	0
22	C	2 2 b iv	PS3	54	34	14	14	54*	18
23	D	2 2 c iv	KU	52	21	37	6	6	52*
24	C	2 2 c v	KU	69	44	6	12	69*	13
25	A	2 2 c v	KU	76	26	76*	7	6	12
26	B	4 2 a	PS3	64	41	4	64*	26	6
27	A	2 2 c iv	KU	65	32	65*	14	12	10
28	B	4 2 b	PS6	70	31	1	70*	12	17
29	D	4 2 b	KU	58	39	14	13	14	58*
30	A	4 2 b	KU	91	27	91*	4	4	1



Mathematics Higher 2013

Section A

Number of persons in test: 20,455
 Average test score: 26.41
 Average facility value: 66.03
 Reliability: 0.72

Item	Key	Content Area	Fac	Disc	% Choosing Option			
					A	B	C	D
1	A	A4	96	22	96*	1	2	1
2	B	C4	83	36	8	83*	7	1
3	B	A17	90	24	3	90*	4	3
4	A	T4	44	38	44*	40	4	11
5	D	G3	76	38	5	7	12	76*
6	C	A21	95	18	1	1	95*	3
7	B	C12	83	33	1	83*	10	5
8	C	A11/A12	75	30	17	3	75*	5
9	A	T9	73	44	73*	7	16	4
10	D	T5	43	12	12	18	25	43*
11	B	A3	81	22	2	81*	6	11
12	C	G16/G20	51	25	9	30	51*	9
13	A	A1	60	33	60*	9	24	7
14	B	G26/G29	59	37	16	59*	19	5
15	C	T7	41	20	32	14	41*	12
16	C	C13/C22	57	36	4	8	57*	31
17	C	A19	43	29	15	22	43*	20
18	D	C21	80	24	2	16	3	80*
19	B	A16	49	30	26	49*	11	13
20	D	A7	40	25	24	17	19	40*



Physics Intermediate 1 2013

Section A

Number of persons in test: 2,490
 Average test score: 13.04
 Average facility value: 65.22
 Reliability: 0.67

Item	Key	Content Area	Abilities	Fac	Disc	% Choosing Option				
						A	B	C	D	E
1	B	1 2 5	KU	67	21	8	67*	5	6	13
2	A	1 3 3	KU	87	26	87*	1	9	1	2
3	D	1 4 2	PS	90	19	1	1	2	90*	5
4	B	1 4 6	KU	66	24	9	66*	7	11	8
5	C	1 5 7	KU	85	30	1	5	85*	2	7
6	B	2 1 10	PS	72	27	3	72*	3	16	5
7	A	2 2 5	PS	21	28	21*	15	19	20	25
8	A	2 2 2	KU	64	22	64*	14	13	5	4
9	C	2 3 11	KU	33	23	7	17	33*	6	37
10	D	3 1 1	KU	42	25	36	1	20	42*	1
11	A	3 1 9	KU	70	21	70*	13	14	1	1
12	E	3 3 1/3 3 2/3 3 5	KU	81	25	5	6	6	2	81*
13	B	4 1 7	KU	76	20	16	76*	2	5	2
14	E	4 1 8	PS	54	28	5	3	18	19	54*
15	B	4 3 2	KU	83	33	1	83*	5	5	6
16	A	5 1 12	KU	77	27	77*	6	7	6	4
17	C	5 3 3	PS	77	23	14	3	77*	2	4
18	E	6 1 4/6 1 10	KU	47	26	13	13	17	11	47*
19	D	6 2 1	KU	71	27	1	15	12	71*	0
20	A	6 2 3	PS	43	22	43*	26	6	3	22



Physics Intermediate 2 2013

Section A

Number of persons in test: 4,822
 Average test score: 11.73
 Average facility value: 58.64
 Reliability: 0.76

Item	Key	Content	Area	Ability	Fac	Disc	% Choosing Option					
							A	B	C	D	E	
1	B	1	1	5	KU	60	37	13	60*	10	10	7
2	D	1	1	6	KU	94	19	0	2	0	94*	4
3	E	1	2	6	PS	93	22	1	3	2	1	93*
4	D	1	2	14	KU	51	37	16	19	11	51*	2
5	E	1	2	16	PS	84	17	1	2	4	10	84*
6	A	1	4	1	KU	42	29	42*	6	29	4	18
7	D	1	4	5	PS	31	43	35	23	6	31*	3
8	A	2	1	1	PS	59	-5	59*	5	31	2	2
9	A	2	1	8	PS	60	35	60*	5	6	20	8
10	C	2	1	9/2	KU	71	43	8	13	71*	5	3
11	B	2	1	17/2	PS	47	48	2	47*	2	46	4
12	C	2	4	6	KU	46	25	21	0	46*	31	1
13	B	3	1	8	PS	71	33	4	71*	11	10	5
14	E	3	2	2	PS	33	49	41	9	7	9	33*
15	D	3	2	9	KU	56	27	27	2	9	56*	5
16	B	3	3	3	PS	26	20	7	26*	50	5	12
17	C	4	1	1/4	KU	59	47	4	7	59*	13	18
18	E	4	1	4	PS	67	43	7	13	3	10	67*
19	A	4	1	5	KU	81	31	81*	9	3	6	1
20	C	4	2	1/4	KU	43	42	4	11	43*	32	10



Physics Higher 2013

Section A

Number of persons in test: 8,809
 Average test score: 13 41
 Average facility value: 67 06
 Reliability: 0 74

Item	Key	Content Area	Abilities	Fac	Disc	% Choosing Option				
						A	B	C	D	E
1	E	1 1 3	KU	89	24	3	1	2	6	89*
2	B	1 2 3/1 2 6	PS	76	26	11	76*	6	4	3
3	B	4 2 11	KU	73	36	14	73*	1	5	6
4	A	1 3 2	PS	59	39	59*	5	15	16	4
5	C	1 3 3	PS	70	25	3	1	70*	13	12
6	A	1 4 6	PS	83	36	83*	7	3	4	2
7	C	1 6 5/1 6 6	PS	60	36	13	15	60*	10	1
8	E	2 1 1/2 1 2/2 1 3	KU	63	31	1	4	6	26	63*
9	D	2 1 15	PS	57	29	12	13	7	57*	11
10	E	2 3 1, 2 3 3	PS	43	23	7	34	4	11	43*
11	D	2 3 5/2 3 7/2 3 8	PS	44	14	19	25	6	44*	5
12	B	2 2 3/2 3 11	PS	61	38	16	61*	9	5	8
13	E	2 4 5	PS	59	45	4	13	11	12	59*
14	A	3 1 3	KU	74	26	74*	4	3	9	9
15	B	3 2 5/3 2 6	PS	83	26	1	83*	2	4	10
16	D	3 3 1	KU	85	26	1	4	1	85*	9
17	B	3 3 4/3 3 5	KU	62	33	13	62*	6	16	2
18	C	3 3 30	KU	77	34	1	12	77*	2	9
19	D	3 4 1	KU	68	29	4	7	4	68*	16
20	D	3 4 3	PS	56	31	7	16	6	56*	15



Physics (Revised) Higher 2013

Section A

Number of persons in test: 836
 Average test score: 13 74
 Average facility value: 68 70
 Reliability: 0 73

Item	Key	Content Area	Abilities	Fac	Disc	% Choosing Option				
						A	B	C	D	E
1	A	ODU EofM	KU	92	24	92*	5	1	1	0
2	B	ODU EofM	KU	81	30	8	81*	5	4	2
3	B	ODU EofM	Skills	74	36	12	74*	2	7	6
4	A	ODU F,E&P	KU	54	39	54*	4	19	17	5
5	E	ODU F,E&P	KU	74	37	2	16	6	2	74*
6	A	ODU Coll	KU	82	32	82*	6	4	5	2
7	B	ODU Grav	Skills	67	41	1	67*	24	6	2
8	A	ODU ExU	KU	93	24	93*	2	4	1	1
9	C	ODU ExU	KU	84	27	10	3	84*	1	1
10	C	P&W SM	KU	81	22	11	1	81*	5	2
11	E	P&W SM	KU	70	20	1	3	4	21	70*
12	D	P&W NucR	Skills	59	30	4	19	5	59*	12
13	B	P&W WaP	Skills	64	33	10	64*	7	16	2
14	C	P&W WaP	Skills	54	23	16	19	54*	8	2
15	B	P&W Refr	KU	75	30	1	75*	3	4	16
16	D	P&W Spec	KU	78	32	1	8	1	78*	12
17	B	E E&E	KU	27	23	6	27*	21	22	22
18	E	E E&E	KU	49	23	8	31	4	7	49*
19	D	E E&E	Skills	59	25	18	10	4	59*	9
20	D	E E&W	KU	55	39	13	7	8	55*	18



Scottish Qualifications Authority

Guidance on interpreting the information given in the Data Booklet

1 **Item**

This is the number of the question in the question paper.

2 **Key**

This is the correct option for the question.

3 **Content Area**

This is the section shown in the appropriate published arrangement documents. It is appreciated that in the case of some items more than one content area might be considered appropriate.

4 **Ability**

An attempt has been made to classify each item according to the educational ability being tested although the limitations of this exercise are fully recognised. Abilities used are:

- KU for Knowledge and Understanding;
- PS for Problem Solving;
- Skills are used to classify a Skills mark within the Revised courses.

Please note that this information is not provided for Mathematics.

5 **Fac**

This is the facility value of the question, ie: the fraction of learners in the sample choosing the correct option.

6 **Disc**

This is the discrimination for an item. It is the ability of an item to tell high scoring and low scoring learners apart. The result ranges from -100 through 100 and a high value means that able learners (high total test score) tend to answer the question correctly and learners with a low total test score tend to answer the question incorrectly. The item is then said to be consistent with the test. With zero discrimination there is no relationship between the performance on the item and the performance on the test as a whole. A negative discrimination means able learners tend to answer the item incorrectly and persons with a low total test score tend to answer the items correctly.

7 **Percentage choosing option**

This shows, for each option, the percentage of learners selecting it. Percentages have been corrected to the nearest whole number. Correct options are asterisked.