



Objective Tests 2012 Data Booklet



Biology Intermediate 1 2012

Section A

Number of persons in test : 6,211
 Average test score : 14.32
 Average facility value : 57.28
 Reliability : 0.70

Item	Key	Content Area	Ability	Fac	Disc	% Choosing option			
						A	B	C	D
1	B	1 3 (i)	KU	67	20	8	67*	20	4
2	C	1 1 (i)	KU	63	25	6	5	63*	25
3	D	1 1 (ii) b	KU	62	27	13	7	17	62
4	C	1 2 (iii) e	KU	40	22	12	6	40*	42
5	A	1 4 (ii) c	KU	51	20	51*	7	35	7
6	A	1 2 (ii)	PS1	44	28	44*	16	36	4
7	D	1 2 (ii)	PS3	66	31	16	7	11	66*
8	A	1 2 (ii)	PS1	67	20	67*	23	3	7
9	C	1 1 (i)	KU	95	15	1	2	95*	2
10	B	3 1 (iii)	PS1	74	25	10	74*	5	11
11	B	3 1 (i)	KU	60	33	3	60*	21	16
12	D	3 1 (ii)	KU	60	27	20	14	7	60*
13	A	3 1 (iv)	KU	36	12	36*	39	15	8
14	A	3 1 (ii)	PS3	54	35	54*	27	7	12
15	B	3 1 (iii)	KU	68	31	5	68*	15	12
16	B	3 2 (i)	PS4	42	20	8	42*	36	13
17	D	3 2 (i)	KU	62	33	16	9	12	62*
18	C	2 3 (i)	PS5	59	33	15	12	59*	14
19	C	2 3 (i)	PS1	41	30	32	13	41*	14
20	A	2 3 (iii)	KU	66	28	66*	13	17	4
21	D	2 4 (iii)	KU	55	31	17	6	21	55*
22	A	2 2 (i)	PS5	42	17	42*	43	8	7
23	C	2 1 (iv)	KU	46	-5	8	29	46*	17
24	A	2 1 (iii)	PS3	60	20	60*	17	16	6
25	B	2 1 (iii)	KU	52	38	11	52*	13	23



Biology Intermediate 2 2012

Section A

Number of persons in test : 6,517
 Average test score : 16.41
 Average facility value : 65.63
 Reliability : 0.80

							% Choosing option			
Item	Key	Content Area		Ability	Fac	Disc	A	B	C	D
1	C	1 e 1	(iv)	KU	74	41	9	2	74*	14
2	B	1 a	(ii)	KU	92	22	3	92*	1	4
3	C	1 b	(iv)	KU	61	28	26	7	61*	6
4	D	1 a	(i)	PS3	64	43	7	20	9	64*
5	C	1 d 2	(i)	PS4	33	23	33	15	33*	19
6	A	1 c 1	(i)	KU	72	41	72*	2	25	1
7	C	1 a	(iii)	KU	58	27	15	15	58*	13
8	A	1 c 2		PS1	71	7	71*	15	6	8
9	B	2 a 2	(i)	KU	65	33	25	65*	8	2
10	A	2 a 1	(i)	PS3	80	26	80*	12	6	2
11	D	2 a 1	(i)	PS3	38	42	12	46	4	38*
12	A	2 a 2	(iii)	PS4	63	42	63*	9	22	6
13	D	2 b 2	(v)	KU	81	38	5	9	5	81*
14	D	2 b 2	(vii)	PS6	51	48	3	12	34	51*
15	B	2 b 2	(vii)	PS6	50	46	24	50*	17	8
16	B	2 b 2	(ix)	KU	83	28	6	83*	4	6
17	D	3 a 2	(iii)	KU	83	23	3	12	2	83*
18	D	3 a 1	(iii)	PS3	95	20	1	1	2	95*
19	B	3 a 2	(iii)	KU	52	39	20	52*	24	4
20	A	3 a 2	(iv)	KU	41	37	41*	38	8	13
21	A	3 c 1	(ii)	KU	58	36	58*	21	15	6
22	C	3 b	(ii)	PS3	77	31	3	10	77*	9
23	A	3 b	(iii)	PS4	80	27	80*	6	12	2
24	C	3 b	(iv)	KU	47	32	22	14	47*	17
25	B	3 c 1	(i)	KU	70	31	17	70*	8	5



Biology Higher 2012

Section A

Number of persons in test : 9,507
 Average test score : 21.31
 Average facility value : 71.03
 Reliability : 0.79

Item	Key	Content Area		Ability	Fac	Disc	% Choosing option			
							A	B	C	D
1	B	1 a	(ii)	KU	93	19	6	93*	1	0
2	A	1 a	(ii)	PS6	63	39	63*	20	10	7
3	A	1 a	(ii)	KU	81	30	81*	6	4	9
4	D	1 b 1	(ii)	KU	81	26	4	4	10	81*
5	A	1 b 2	(ii)	PS6	56	14	56*	15	22	6
6	B	1 c	(iv)	KU	68	35	12	68*	8	11
7	C	1 c	(ii)	KU	56	18	5	35	56*	3
8	C	1 c	(v)	PS6	84	17	1	11	84*	4
9	D	1 b 2	(i)	KU	68	30	4	13	16	68*
10	D	1 d	(iv)	KU	67	35	8	9	16	67*
11	C	2 a 1	(ii)	KU	49	30	6	41	49*	4
12	C	2 a 2	(iii)	PS3	69	45	3	10	69*	18
13	D	2 a 3	(iv)	KU	67	34	6	22	5	67*
14	A	2 a 3	(vi)	KU	78	34	78*	7	9	5
15	B	2 b 2	(ii)	KU	84	30	7	84*	3	6
16	A	2 b 2	(iii)	KU	73	40	73*	5	18	4
17	B	2 c 1	(i)	PS1	88	18	1	88*	4	6
18	B	3 c 1	(i)	KU	66	38	10	66*	8	15
19	C	2 c 1 A	(iii)	KU	75	19	2	15	75*	8
20	B	2 c 3	(i)	PS4	40	21	16	40*	27	17
21	B	3 a 1	(iv)	PS3	50	35	20	50*	24	6
22	C	3 a 1	(i)	KU	58	37	20	14	58*	8
23	A	3 a 3	(ii)	KU	77	41	77*	6	7	9
24	D	3 a 2	(i)	KU	80	39	2	3	14	80*
25	B	3 a 3	(ii)	PS6	88	26	3	88*	4	5
26	D	3 a 4	(ii)	PS2	72	28	13	7	9	72*
27	C	3 a 4	(iii)	KU	80	22	9	4	80*	7
28	D	3 a 4	(iv)	KU	66	40	11	6	16	66*
29	A	3 b	(ii)	KU	71	33	71*	11	7	10
30	C	2 c A	(iii)	PS3/6	81	27	10	4	81*	5



Biology (Revised) Higher 2012

Section A

Number of persons in test : 33
 Average test score : 16.67
 Average facility value : 55.56
 Reliability : 0.58

Item	Key	Content Area			Ability	Fac	Disc	% Choosing option			
								A	B	C	D
1	C	U1	1 a	(ii)	KU	33	9	33	12	33*	21
2	B	U1	1 a	(i)	PS	67	31	24	67*	9	0
3	D	U1	3 d	(i)	KU	24	-25	55	6	15	24*
4	A	U1	3 c	(iv)	KU	48	27	48*	3	6	42
5	B	U1	3 c	(iv)	PS	88	29	0	88*	9	3
6	A	U1	2 a	(i)	PS	48	-13	48*	18	15	15
7	B	U1	2 a	(i)	PS	45	15	15	45*	18	21
8	A	U1	2 a	(v)	KU	27	16	27*	24	33	15
9	D	U1	3 b	(ii)	KU	91	-16	6	3	0	91*
10	D	U1	2 c	(i)	KU	39	31	21	24	15	39*
11	B	U2	1 a	(ii)	KU	30	1	18	30*	21	24
12	A	U2	1 b		KU	55	34	55*	12	3	30
13	C	U2	2 c	(ii)	PS	88	3	12	0	88*	0
14	B	U2	1 b		PS	52	46	0	52*	36	12
15	D	U2	1 a	(i)	KU	70	-9	9	9	9	70*
16	A	U2	3 a	(ii)	KU	24	-18	24*	58	12	6
17	A	U2	1 c		PS	79	34	79*	12	3	6
18	D	U2	2 b		KU	45	43	12	27	15	45*
19	D	U2	3 b	(ii)	KU	21	-14	21	30	24	21*
20	B	U2	2 c	(i)	KU	73	33	15	73*	3	9
21	B	U3	1 d	(i)	KU	42	18	6	42*	39	12
22	C	U3	1 d	(ii)	KU	82	42	6	0	82*	12
23	A	U3	1 c		KU	70	10	70*	6	12	9
24	D	U3	1 d	(iii)	KU	45	32	42	6	0	45*
25	C	U3	2 b	(i)	KU	70	35	15	12	70*	3
26	C	U3	1 a		PS	61	28	6	30	61*	3
27	B	U3	2 b		PS	58	17	18	58*	9	15
28	C	U3	3 b	(ii)	KU	70	-13	6	12	70*	12
29	A	U3	2 b	(ii)	KU	39	27	39*	45	15	0
30	C	U3	1 b		PS	82	13	0	3	82*	15



Biology Advanced Higher 2012

Section A

Number of persons in test : 2,373
Average test score : 17.70
Average facility value : 70.81
Reliability : 0.65

							% Choosing option			
Item	Key	Content Area		Ability	Fac	Disc	A	B	C	D
1	B	1 a	(i)	KU	81	21	2	81*	9	7
2	D	1 a	(i)	PS3	64	13	16	3	17	64*
3	D	1 a	(ii)	KU	75	30	8	7	11	75*
4	B	1 d	(v)	KU	44	10	13	44*	11	32
5	D	1 b	(i)	KU	59	30	5	17	18	59*
6	C	1 b	(ii)	KU	85	28	4	6	85*	5
7	A	1 b	(iv)	KU	89	27	89*	2	8	1
8	C	1 b	(iv)	PS3	75	13	1	21	75*	3
9	A	1 b	(iii)	KU	68	26	68*	22	4	5
10	B	1 c	(ii)	KU	75	30	4	75*	11	10
11	C	1 c	(ii)	PS6	67	21	10	12	67*	10
12	D	1 d	(i)	PS1	80	24	7	7	7	80*
13	C	1 d	(iv)	KU	83	19	5	1	83*	11
14	A	2 a 1	(i)	KU	33	20	33*	31	28	8
15	B	2 a 1	(ii)	KU	80	23	17	80*	3	0
16	A	2 a 1	(i)	PS3	66	25	66*	14	12	7
17	B	2 a 1	(i)	PS6	42	15	30	42*	13	15
18	C	2 a 1	(ii)	KU	54	19	9	24	54*	13
19	D	2 b 1	(i)	KU	95	16	4	0	0	95*
20	C	2 b 2	(i)	PS7	75	17	12	3	75*	9
21	B	2 b 3	(ii)	KU	82	24	6	82*	6	7
22	D	2 b 1	(ii)	PS6	75	16	11	10	4	75*
23	A	2 c	(ii)	KU	85	29	85*	4	8	3
24	C	2 c	(iii)	KU	86	28	2	8	86*	3
25	A	2 c	(i)	KU	52	20	52*	30	11	7



Biotechnology Intermediate 2 2012

Section A

Number of persons in test : 55
 Average test score : 15.02
 Average facility value : 60.07
 Reliability : 0.67

Item	Key	Content Area	Ability	Fac	Disc	% Choosing option			
						A	B	C	D
1	B	1 a (v)	KU	82	18	7	82*	5	5
2	A	1 a (v)	KU	56	13	56*	5	5	33
3	D	1 a (i)	KU	25	10	51	18	4	25*
4	B	1 a (iii)	KU	45	50	5	45*	38	11
5	B	1 c (i)	KU	45	41	25	45*	16	11
6	C	1 c (i)	KU	71	34	25	2	71*	2
7	C	2 a (iv)	KU	49	25	11	24	49*	16
8	D	1 b (iv)	PS	53	41	4	16	27	53*
9	B	2 a (iv)	KU	89	16	7	89*	2	0
10	A	2 b (ii)	KU	35	23	35*	7	27	31
11	C	2 a (iii)	PS	62	37	7	27	62*	4
12	A	2 a (i)	KU	55	8	55*	11	29	5
13	B	1 a (i)	PS	78	16	2	78*	13	7
14	D	2 b (i)	KU	98	11	2	0	0	98*
15	B	2 a (iv)	PS	87	23	11	87*	0	2
16	C	3 d (iv)	KU	71	9	2	24	71*	4
17	A	3 d (iv)	KU	35	18	35*	29	4	33
18	D	3 a (iii)	KU	45	43	5	20	29	45*
19	D	3 c (ii)	KU	36	10	16	25	22	36*
20	C	3 c (i)	KU	60	37	29	4	60*	7
21	D	3 b (i)	PS	75	36	2	24	0	75*
22	C	1 b (iii)	PS	31	17	24	20	31*	24
23	A	3 c (ii)	PS	51	7	51*	24	22	4
24	C	2 a (iv)	PS	96	0	0	4	96*	0
25	B	1 b (iii)	PS	71	4	9	71*	13	7



Biotechnology Higher 2012

Section A

Number of persons in test : 9
 Average test score : 20.56
 Average facility value : 68.52
 Reliability : 0.71

Item	Key	Content Area	Ability	Fac	Disc	% Choosing option			
						A	B	C	D
1	C	1 a (ii)	KU	89	34	0	11	89*	0
2	D	1 c (i)	KU	78	11	11	0	11	78*
3	A	1 c (i)	KU	56	6	56*	33	11	0
4	D	1 b 2 (ii)	KU	78	-42	0	11	11	78*
5	B	1 b 3 (iii)	KU	78	11	22	78*	0	0
6	A	1 b 2 (i)	PS	78	39	78*	11	11	0
7	B	1 c (ii)	KU	89	34	0	89*	0	11
8	C	1 b (ii)	PS	56	12	22	11	56*	11
9	B	1 c (i)	PS	56	82	22	56*	0	22
10	A	1 b 3 (v)	PS	67	35	67*	33	0	0
11	B	1 b 3 (v)	PS	89	15	0	89*	0	11
12	D	1 c (i)	PS	100	0	0	0	0	100*
13	A	1 a (ii)	KU	89	15	89*	11	0	0
14	C	2 b (ii)	KU	100	0	0	0	100*	0
15	D	2 a 1 (i)	PS	100	0	0	0	0	100*
16	C	2 b 2 (i)	KU	56	-6	11	33	56*	0
17	D	2 a 2 (i)	KU	33	81	22	11	33	33*
18	A	3 a 6 (iii)	KU	67	69	67*	11	0	22
19	D	2 a (iv)	PS	67	35	0	22	11	67*
20	C	3 a 1 (ii)	KU	67	29	0	33	67*	0
21	B	3 b 2 (ii)	PS	33	14	11	33*	0	56
22	B	3 b 2 (ii)	KU	78	47	22	78*	0	0
23	A	3 b 2 (i)	KU	78	54	78*	0	22	0
24	C	3 b 2 (v)	PS	44	45	33	0	44*	22
25	B	3 b 2 (v)	KU	22	-24	11	22*	22	44
26	C	3 b 3 (ii)	PS	56	-17	22	22	56*	0
27	C	1 b 2 (i)	PS	11	-38	78	0	11*	11
28	A	3 a 4 (iii)	KU	67	69	67*	11	0	22
29	D	3 a 1 (iii)	KU	89	34	0	11	0	89*
30	A	3 b 3 (ii)	KU	89	34	89*	0	0	11



Chemistry Intermediate 1 2012

Section A

Number of persons in test : 2,999
Average test score : 11.93
Average facility value : 59.64
Reliability : 0.59

Item	Key	Content Area	Ability	Fac	Disc	% Choosing option			
						A	B	C	D
1	D	1 (b) (i)	KU	76	19	16	2	5	76*
2	A	1 (b) (ii)	KU	60	21	60*	7	32	1
3	B	1 (c) (i)	KU	54	2	26	54*	10	10
4	C	1 (c) (i)	PS	61	17	9	9	61*	20
5	D	1 (c) (iii)	KU	43	19	42	8	7	43*
6	B	1 (d) (i)	KU	81	24	8	81*	9	3
7	C	2 (b) (i)	PS	51	13	43	3	51*	3
8	D	2 (b) (i)	KU	67	26	12	6	14	67*
9	A	2 (b) (ii)	KU	79	28	79*	3	13	5
10	B	2 (b) (ii)	KU	62	11	8	62*	4	25
11	A	2 (c) (i)	KU	49	31	49*	7	37	6
12	D	2 (c) (v)	PS	62	9	23	6	10	62*
13	A	2 (d) (iv)	KU	30	27	30*	32	27	10
14	C	2 (c) (i)	PS	55	25	12	26	55*	8
15	B	3 (b) (i)	KU	46	30	10	46*	11	33
16	B	3 (b) (ii)	KU	37	32	23	37*	24	16
17	D	3 (c)	PS	79	17	7	3	11	79*
18	C	3 (c) (iii)	PS	73	17	17	6	73*	4
19	C	3 (d)	PS	46	15	27	13	46*	14
20	A	3 (d) (ii)	KU	82	21	82*	11	2	5



Chemistry Intermediate 2 2012

Section A

Number of persons in test : 4,514
 Average test score : 19.56
 Average facility value : 65.19
 Reliability : 0.82

Item	Key	Content Area	Ability	Fac	Disc	% Choosing option			
						A	B	C	D
1	A	1 (a) (i)	PS	84	29	84*	2	1	13
2	B	1 (b) (i)	PS	95	20	2	95*	0	2
3	A	1 (a) (ii)	PS	45	35	45*	15	37	2
4	D	1 (c) (ii)	PS	81	38	7	3	9	81
5	C	1 (d) (i)	PS	40	52	8	2	40*	50
6	D	1 (d) (i)	PS	61	48	12	9	18	61*
7	A	1 (d) (i)	KU	78	40	78*	10	6	6
8	A	1 (d) (i)	KU	49	35	49*	33	16	2
9	B	1 (d) (ii)	PS	63	39	13	63*	17	7
10	A	1 (d) (iii)	KU	55	18	55*	39	1	6
11	B	2 (a) (i)	PS	68	37	6	68*	22	4
12	A	2 (a) (ii)	KU	76	35	76*	6	10	9
13	D	2 (b) (i)	PS	78	36	3	7	12	78*
14	C	2 (b) (iii)	PS	48	7	15	17	48*	20
15	A	2 (c) (ii)	PS	70	41	70*	21	5	4
16	D	2 (d) (i)	KU	47	36	37	8	9	47*
17	C	2 (d) (i)	PS	84	35	4	7	84*	4
18	D	2 (d) (i)	KU	68	37	5	25	3	68*
19	C	2 (e) (iii)	KU	85	24	2	12	85*	1
20	C	2 (e) (ii)	KU	71	28	17	8	71*	4
21	B	3 (a) (i)	PS	66	32	13	66*	13	8
22	B	3 (b) (i)	KU	61	14	4	61*	8	28
23	A	3 (c) (i)	PS	87	33	87*	5	3	4
24	C	3 (b) (i)	KU	58	28	17	20	58*	4
25	D	3 (b) (i)	PS	44	49	9	23	23	44*
26	B	3 (b) (iii)	KU	64	37	14	64*	12	9
27	C	3 (c) (i)	KU	38	38	29	22	38*	10
28	D	3 (c) (i/ii)	PS	66	22	8	21	4	66*
29	C	3 (c) (iv)	PS	65	37	13	10	65*	12
30	D	3 (c)	KU	61	37	7	10	22	61*



Chemistry Higher 2012

Section A

Number of persons in test : 10,239
Average test score : 27.33
Average facility value : 68.33
Reliability : 0.86

Item	Key	Content Area	Ability	Fac	Disc	% Choosing option			
						A	B	C	D
1	D	Standard Grade	KU	76	39	11	8	5	76*
2	C	Standard Grade	PS	55	29	11	24	55*	10
3	D	Standard Grade	KU	33	38	13	10	44	33*
4	C	Standard Grade	PS	58	29	13	18	58*	11
5	B	1 (a) (i)	PS	62	35	19	62*	9	11
6	D	1 (a) (ii)	KU	79	38	6	5	11	79*
7	C	1 (a) (iii)	KU	65	38	17	6	65*	11
8	B	1 (b) (i)	KU	79	39	6	79*	7	8
9	A	1 (b) (ii)	PS	44	29	44*	33	10	12
10	C	1 (c)	PS	62	36	4	9	62*	26
11	D	1 (d)	PS	78	32	7	11	3	78*
12	B	1 (d) (i)	KU	68	41	14	68*	3	14
13	B	1 (d) (iii)	KU	88	18	3	88*	6	3
14	C	1 (d) (iv)	PS	54	31	9	11	54*	26
15	D	1 (e) (i)	PS	75	36	7	8	9	75*
16	B	1 (e) (ii)	KU	74	40	16	74*	5	5
17	A	1 (e) (iii)	KU	61	43	61*	17	13	8
18	A	2 (a) (i)	KU	90	30	90*	3	2	5
19	C	2 (a) (ii)	KU	94	17	1	5	94*	1
20	A	2 (a) (i)	KU	60	39	60*	11	5	24
21	A	2 (b) (i)	PS	56	41	56*	10	15	19
22	B	2 (a) (ii)	KU	92	29	4	92*	3	1
23	B	2 (b) (iii)	PS	74	47	10	74*	5	11
24	A	2 (b) (iv)	PS	78	41	78*	5	11	6
25	C	2 (c) (i)	KU	85	28	6	6	85*	3
26	D	2 (c) (ii)	KU	87	38	6	3	4	87*
27	D	2 (e) (i)	KU	83	36	7	3	6	83*
28	C	2 (e) (ii)	KU	57	38	13	21	57*	9
29	B	2 (f) (ii)	PS	74	30	9	74*	12	4
30	A	3 (b)	PS	56	32	56*	9	24	10
31	B	3 (c) (i)	PS	71	12	18	71*	8	2
32	D	3 (c) (ii)	KU	83	35	2	11	3	83*
33	A	3 (c) (ii)	PS	54	45	54*	25	17	4
34	C	3 (d) (i)	PS	54	13	5	8	54*	33
35	B	3 (d) (ii)	KU	62	26	14	62*	20	4
36	D	3 (d) (ii)	PS	65	35	4	6	26	65*
37	D	3 (e) (i)	KU	43	33	9	42	6	43*
38	A	3 (e) (iii)	KU	80	40	80*	4	7	9
39	B	3 (f) (iii)	KU	75	36	11	75*	3	11
40	C	Standard Grade	PS	53	34	11	26	53*	9



Chemistry (Revised) Higher 2012

Section A

Number of persons in test : 240
 Average test score : 21.04
 Average facility value : 70.13
 Reliability : 0.73

Item	Key	Content Area		Ability	Fac	Disc	% Choosing option			
							A	B	C	D
1	C	PPP	1 (e)	KU	90	16	4	1	90*	5
2	B	PPP	1 (b)	KU	78	33	8	78*	3	12
3	B	PPP	1 (b)	KU	90	24	2	90*	6	3
4	C	PPP	1 (d)	KU	76	32	2	5	76*	17
5	D	PPP	1 (f)	KU	36	32	14	10	40	36*
6	D	PPP	2 (e)	KU	83	27	4	12	2	83*
7	C	PPP	2 (f)	KU	60	28	15	11	60*	14
8	C	PPP	3 (b)	KU	57	21	10	25	57*	7
9	D	PPP	3 (d)	KU	43	9	3	49	5	43*
10	A	CC	1 (a)	KU	79	19	79*	5	5	10
11	B	CC	3 (d)	Skills	78	38	10	78*	4	8
12	D	CC	4 (a)	KU	84	24	10	5	1	84*
13	B	CC	4 (b)	KU	83	10	5	83*	2	9
14	C	CC	5 (c)	KU	96	10	1	3	96*	0
15	B	CC	5 (d)	Skills	78	31	10	78*	7	5
16	A	CC	6 (a)	Skills	55	32	55*	22	18	4
17	B	CC	7 (b)	KU	98	25	2	98*	0	0
18	D	CC	7 (b)	KU	92	35	5	1	2	92*
19	A	CC	9 (b)	KU	75	13	75*	7	8	9
20	A	PtoP	1 (b)	Skills	58	38	58*	18	16	8
21	B	PtoP	1 (d)	KU	69	1	19	69*	10	2
22	D	PtoP	1 (e)	KU	82	26	2	14	3	82*
23	C	PtoP	1 (g)	Skills	58	30	23	3	58*	15
24	B	PtoP	2 (b)	KU	78	25	5	78*	10	8
25	D	PtoP	2 (c)	KU	78	42	8	2	12	78*
26	A	PtoP	3 (a)	Skills	36	38	36*	37	10	15
27	A	PtoP	3 (b)	Skills	49	30	49*	8	30	10
28	D	PtoP	3 (d)	KU	54	45	18	5	23	54*
29	A	PtoP	4 (a)	KU	23	-13	23*	72	3	2
30	C	RC		Skills	88	20	5	4	88*	2



Chemistry Advanced Higher 2012

Section A

Number of persons in test : 2,431
 Average test score : 25.77
 Average facility value : 64.43
 Reliability : 0.81

Item	Key	Content Area	Ability	Fac	Disc	% Choosing option			
						A	B	C	D
1	A	1 (a) (i)	KU	87	30	87*	7	4	3
2	D	1 (a) (ii)	PS	46	24	9	13	32	46*
3	D	1 (a) (iii)	PS	76	29	8	10	7	76*
4	A	1 (a) (iii)	KU	37	23	37*	56	4	3
5	B	1 (a) (iii)	KU	69	30	27	69*	2	2
6	B	1 (b) (ii)	PS	57	31	6	57*	17	20
7	D	1 (c) (iii)	PS	46	22	9	5	39	46*
8	C	2 (b) (i)	KU	80	17	8	9	80*	4
9	C	2 (b) (i)	PS	22	26	56	12	22*	10
10	A	2 (b) (i)	PS	30	26	30*	29	34	6
11	C	2 (b) (iii)	KU	49	30	4	35	49*	13
12	D	2 (b) (iii)	PS	50	42	13	26	10	50*
13	D	2 (b) (iii)	PS	92	15	4	3	1	92*
14	B	2 (c) (i)	KU	74	27	14	74*	7	5
15	A	2 (c) (i)	PS	79	28	79*	4	7	10
16	A	2 (c) (i)	KU	56	24	56*	7	17	20
17	A	2 (c) (ii)	PS	36	40	36*	3	31	30
18	C	2 (c) (iii)	KU	73	40	5	6	73*	16
19	C	2 (c) (iii)	PS	81	33	5	8	81*	7
20	D	2 (d) (i)	PS	89	28	7	2	2	89*
21	C	2 (d) (i)	KU	47	30	11	32	47*	10
22	C	2 (d) (ii)	PS	67	16	9	21	67*	3
23	B	3 (a) (i)	KU	68	27	2	68*	5	25
24	D	3 (a) (ii)	KU	86	31	10	4	1	86*
25	B	3 (a) (ii)	KU	72	35	5	72*	6	17
26	A	3 (a) (iii)	KU	72	24	72*	2	7	20
27	C	3 (a) (iii)	PS	66	29	14	12	66*	8
28	D	3 (b) (i)	KU	78	33	2	16	4	78*
29	A	3 (b) (i)	PS	56	35	56*	19	19	6
30	B	3 (b) (i)	PS	88	22	5	88*	4	2
31	B	3 (b) (i)	PS	20	22	57	20*	13	11
32	A	3 (b) (iii)	KU	69	40	69*	13	11	8
33	B	3 (b) (iii)	KU	92	25	4	92*	2	2
34	D	3 (b) (iv)	KU	82	31	7	2	9	82*
35	B	3 (b) (v)	KU	68	36	12	68*	2	17
36	B	3 (c)	PS	50	26	12	50*	34	4
37	D	3 (d) (i)	PS	20	9	11	5	64	20*
38	A	3 (d) (ii)	KU	74	28	74*	5	17	3
39	D	3 (d) (i)	KU	82	29	1	4	13	82*
40	D	3 (e)	KU	94	20	2	1	3	94*



Human Biology Higher 2012

Section A

Number of persons in test : 4,253
Average test score : 19.80
Average facility value : 66.01
Reliability : 0.76

Item	Key	Content Area	Ability	Fac	Disc	% Choosing option			
						A	B	C	D
1	D	1 b 1 (ii)	KU	73	15	25	1	1	73*
2	C	1 b 2 (iv)	KU	54	19	11	15	54*	21
3	D	1 b 2 (i)	PS3	87	32	2	2	9	87*
4	B	1 c (ii)	KU	60	16	5	60*	31	3
5	C	1 d 1 (i)	PS	49	37	25	15	49*	10
6	A	1 d (iii)	KU	70	35	70*	25	2	3
7	C	1 b 2 (ii)	KU	83	33	8	7	83*	2
8	A	1 d 2 (i)	PS6	41	35	41*	29	15	14
9	C	1 f 1 (ii)	KU	52	34	10	13	52*	25
10	A	1 f 1 (iv)	KU	66	28	66*	8	24	3
11	D	1 f 1 (iv)	KU	44	18	10	27	18	44*
12	A	1 f 2 (i)	PS3	71	25	71*	23	4	1
13	A	1 f 2 (ii)	KU	81	32	81*	8	7	3
14	B	2 a (i)	KU	81	31	11	81*	6	2
15	D	2 b (i)	KU	72	28	14	10	4	72*
16	C	1 c (v)	PS6	49	31	13	25	49*	13
17	B	2 b 1 (i)	PS3	50	32	24	50*	20	6
18	B	2 a (i)	PS3	67	32	14	67*	11	7
19	A	2 e (iii)	KU	66	38	66*	14	9	11
20	B	2 e (iii)	KU	55	23	12	55*	13	21
21	B	2 f (iii)	PS1	62	29	6	62*	8	24
22	C	2 f (ii)	KU	58	36	15	9	58*	17
23	A	3 a (ii)	KU	81	26	81*	14	3	2
24	D	3 b 2 (ii)	KU	51	18	2	2	46	51*
25	D	3 b 2 (iv)	KU	95	21	3	1	1	95*
26	D	3 b 2 (iii)	KU	94	22	3	1	2	94*
27	C	3 c 3 (ii)	KU	59	25	14	10	59*	16
28	B	3 b 2 (iii)	PS6	74	26	6	74*	12	7
29	D	3 c (ii)	PS1	75	25	5	4	16	75*
30	B	3 c 2 (i)	PS6	62	23	8	62*	17	12



Human Biology (Revised) Higher 2012

Section A

Number of persons in test : 54
 Average test score : 18.80
 Average facility value : 62.65
 Reliability : 0.85

Item	Key	Content	Area	Ability	Fac	Disc	% Choosing option			
							A	B	C	D
1	C	1 1	d	KU	72	17	9	17	72*	2
2	D	1	b/c	KU	35	25	19	22	24	35*
3	D	1	b 2	(i) PS3	78	41	2	7	13	78*
4	A	1 2	a (iii)	KU	63	33	63*	20	11	4
5	C	1	d 1	(i) PS	48	54	24	19	48*	7
6	A	1 2	c (ii)	KU	59	28	59*	22	11	7
7	A	1 2	c (ii)	KU	80	17	80*	2	4	15
8	C	1 2	d (ii)	KU	76	44	2	7	76*	15
9	D	1 2	d (ii)	KU	76	40	9	7	7	76*
10	D	1 2	d (ii)	PS	43	42	30	17	6	43*
11	A	1 3	a (i)	KU	44	44	44*	33	11	11
12	C	1	c (v)	PS6	46	14	22	20	46*	11
13	B	1 3	b (iii)	KU	54	70	26	54*	11	9
14	C	1 3	b (v)	KU	50	41	19	9	50*	20
15	B	2 1	a	KU	80	31	6	80*	7	7
16	B	2	a (i)	PS3	69	33	17	69*	0	13
17	A	2 1	b (iii)	KU	63	33	63*	6	26	4
18	B	2	b 1	(i) PS3	69	37	22	69*	7	2
19	A	1	f 2	(i) PS3	63	58	63*	33	2	2
20	C	2 2	b (i)	PS	54	50	4	26	54*	17
21	A	2 2	c (iv)	KU	56	30	56*	35	7	2
22	B	2	f (iii)	PS1	65	40	4	65*	4	28
23	C	2	f (ii)	KU	54	38	13	11	54*	22
24	B	3	c 2	(i) PS6	61	32	9	61*	19	11
25	A	3	a (ii)	KU	87	10	87*	6	4	4
26	D	3	b 2	(ii) KU	52	42	4	4	41	52
27	B	3	b 2	(iii) PS6	59	46	7	59*	19	13
28	D	3	b 2	(iii) KU	91	27	7	0	2	91*
29	D	3	b 2	(iv) KU	91	32	7	2	0	91*
30	D	4 1	a (iii)	KU	44	30	31	7	17	44*



Mathematics Higher 2012

Section A

Number of persons in test : 20,336
 Average test score : 24.46
 Average facility value : 61.15
 Reliability : 0.75

Item	Key	Content Area	Fac	Disc	% Choosing option			
					A	B	C	D
1	C	A 11	96	15	3	1	96*	0
2	D	C 4	86	40	1	3	10	86*
3	B	A 5	91	26	3	91*	5	1
4	B	G 2 / T 3	72	34	11	72*	9	8
5	A	T 9	76	38	76*	6	9	8
6	C	C 2	94	22	3	2	94*	1
7	A	G 27 / G 26	80	38	80*	8	5	8
8	C	C 6	67	50	6	24	67*	3
9	A	T 4	71	32	71*	4	22	3
10	B	G 22 / G 21	64	23	9	64*	5	21
11	D	C 14 / C 13	47	28	4	42	6	47*
12	B	T 5	28	30	17	28*	35	19
13	D	A 19 / A 7	62	48	4	31	3	62*
14	A	C 22 / C 13	67	44	67*	6	25	1
15	D	G 18 / G 16	42	30	29	12	17	42*
16	C	C 21 / C 20	29	39	4	3	29*	63
17	D	G 29 / G 26	58	37	19	11	11	58*
18	B	C 7	41	6	13	41*	23	22
19	B	A 16	44	30	31	44*	14	10
20	A	A 28	6	12	6*	36	23	35



Physics Intermediate 1 2012

Section A

Number of persons in test : 2,647
 Average test score : 12.49
 Average facility value : 62.46
 Reliability : 0.64

Item	Key	Content Area	Ability	Fac	Disc	% Choosing option				
						A	B	C	D	E
1	B	1.1.7	KU	92	14	5	92*	1	1	1
2	C	1.2.5	PS	37	19	7	32	37*	5	19
3	D	1.5.7	KU	79	32	3	3	11	79*	3
4	A	2.1.8	KU	34	20	34*	1	23	6	36
5	C	2.1.9	PS	56	29	8	13	56*	17	5
6	E	2.1.6	KU	77	10	2	7	7	7	77*
7	E	2.2.6	KU	55	29	6	23	9	8	55*
8	C	2.2.1	KU	79	23	1	6	79*	13	2
9	A	2.3.4/5	KU	47	21	47*	19	12	10	12
10	B	3.1.1/3/4/10	KU	57	20	27	57*	9	2	6
11	D	3.1.5	KU	94	17	2	1	1	94*	2
12	B	4.1.3	KU	65	31	13	65*	8	7	8
13	E	4.3.2/7/9	KU	71	28	0	2	8	19	71*
14	C	4.4.1	KU	8	10	4	31	8*	12	44
15	E	5.1.1/2	KU	92	22	4	1	2	1	92*
16	E	5.3.4	KU	76	18	1	5	8	10	76*
17	B	6.1.4/10	KU	52	31	12	52*	9	20	7
18	A	6.1.6	KU	56	22	56*	30	3	8	3
19	D	6.1.11	KU	72	31	15	4	3	72*	5
20	C	6.4.5	KU	52	22	11	22	52*	6	10



Physics Intermediate 2 2012

Section A

Number of persons in test : 4,319
 Average test score : 12.69
 Average facility value : 63.47
 Reliability : 0.70

Item	Key	Content Area	Ability	Fac	Disc	% Choosing option				
						A	B	C	D	E
1	D	1.1.6	PS	93	15	2	0	0	93*	4
2	A	1.2.11	PS	36	15	36*	8	7	5	42
3	D	1.2.16	KU	75	36	16	1	1	75*	8*
4	B	1.2.17	PS	85	32	2	85*	8	4	1
5	C	1.2.20	PS	56	23	6	15	56*	15	8*
6	A	1.3.6	KU	67	43	67*	10	6	11	6
7	C	1.3.9/10	PS	60	36	3	20	60*	13	5
8	B	1.4.4	PS	79	35	4	79*	8	8	1*
9	C	2.2.10/11	PS	66	35	2	29	66*	2	1
10	A	2.3.4	PS	7	10	7*	12	11	67	3
11	D	2.4.4	PS	51	22	8	4	22	51*	15
12	A	2.4.1/6	PS	86	12	86*	7	1	2	3
13	B	2.1.4	KU	91	20	2	91*	3	2	1
14	D	2.1.3	KU	88	31	2	1	7	88*	3
15	D	2.2.9	KU	13	13	19	6	40	13*	21*
16	E	2.4.14/15	PS	60	40	11	6	12	11	60*
17	C	3.2.8	KU	42	29	19	10	42*	12	17
18	C	4.1.1/2	KU	67	38	3	18	67*	6	6
19	E	4.1.4	PS	82	27	5	3	3	7	82*
20	E	4.1.10	PS	65	24	18	5	8	4	65*



Physics Higher 2012

Section A

Number of persons in test : 9,129
 Average test score : 12.61
 Average facility value : 63.05
 Reliability : 0.78

Item	Key	Content Area	Ability	Fac	Disc	% Choosing option				
						A	B	C	D	E
1	E	1.1.3	KU	80	26	8	6	3	4	80*
2	A	1.2.3	PS	78	33	78*	9	2	11	1
3	C	1.3.2	PS	54	41	33	9	54*	2	1
4	C	1.4.5	PS	54	36	21	12	54*	11	1
5	C	1.5.4 / 1.6.1	KU	46	22	7	24	46*	19	3
6	D	1.5.8/10	KU	56	26	6	4	7	56*	26
7	B	1.6.2	PS	54	35	31	54*	3	5	7
8	D	2.1.9	PS	50	35	19	14	8	50*	8
9	B	2.1.16	PS	65	37	5	65*	12	14	4
10	C	2.2.1/2	KU	87	32	1	3	87*	2	7
11	B	2.3.5 / 4.2.5	PS	63	23	9	63*	16	10	2
12	E	2.2.3 / 2.3.12	KU	66	44	6	3	14	10	66*
13	D	2.4.5/6	PS	57	46	5	4	3	57*	31
14	E	3.1.9	PS	61	40	23	4	10	2	61*
15	D	3.3.4	PS	67	25	3	7	20	67*	3
16	A	3.3.10	PS	48	48	48*	6	13	19	14
17	A	3.3.14	PS	63	44	63*	11	7	5	13
18	D	3.4.5	PS	52	24	26	5	9	52*	7
19	B	3.4.8	PS	86	29	5	86*	2	2	4
20	B	3.5.15	PS	73	39	8	73*	9	5	5



Physics (Revised) Higher 2012

Section A

Number of persons in test : 454
 Average test score : 13.74
 Average facility value : 68.72
 Reliability : 0.78

Item	Key	Content Area	Ability	Fac	Disc	% Choosing option				
						A	B	C	D	E
1	A	ODU EofM (1)	Skills	78	31	78*	7	1	11	2
2	C	ODU F,E&P (2)	KU	62	46	27	8	62*	1	2
3	C	ODU Coll (3)	KU	57	34	20	11	57*	10	2
4	B	ODU Grav (4)	KU	70	42	2	70*	18	7	3
5	B	ODU SRel (5)	KU	89	27	1	89*	7	0	3
6	C	ODU SRel (5)	KU	71	20	1	17	71*	5	6
7	C	ODU ExU (6)	KU	62	34	6	18	62*	9	5
8	E	ODU ExU (6)	Skills	70	33	2	6	17	6	70*
9	E	P&W I&D (5)	KU	58	42	26	3	10	3	58*
10	D	P&W WaP (4)	KU	75	35	2	5	15	75*	2
11	A	P&W WaP (4)	KU	55	47	55*	5	9	16	15
12	A	P&W Spec (7)	KU	66	40	66*	10	6	4	14
13	D	P&W NucR (3)	KU	52	30	28	6	8	52*	6
14	B	P&W NucR (3)	KU	86	35	5	86*	2	2	6
15	E	P&W SM (1)	KU	79	26	3	10	2	5	79*
16	B	P&W SM (1)	KU	53	31	11	53*	6	19	11
17	D	Electricity E&E (1)	KU	52	26	21	12	9	52*	6
18	B	Electricity E&E (1)	KU	67	39	7	67*	10	13	4
19	C	Electricity E&E (1)	KU	83	34	2	4	83*	2	8
20	D	Electricity E@W (2)	KU	90	24	2	3	2	90*	3



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. Two abilities are presently used: KU for Knowledge and Understanding and PS for Problem Solving. Please note that this information is not provided for Mathematics.

5 Fac

This is the facility value of the question; i.e. 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.