



Objective Tests 2009 Data Booklet



Biology Intermediate 1 2009

Section A

Number of persons in test : 5622
 Average test score : 15.90
 Average facility value : 63.61
 Reliability : 0.68

Item	Key	Content Area	Ability	Fac	Disc	% Choosing Option			
						A	B	C	D
1	A	2 3 (i)	KU	78	18	78*	3	17	2
2	A	2 2 (i)	PS6	91	18	91*	2	6	1
3	B	2 2 (i)	PS3	18	7	53	18*	17	11
4	C	2 1 (iii)	PS6	76	23	3	17	76*	3
5	A	2 1 (iii)	KU	51	31	51*	28	11	10
6	D	2 1 (iv)	KU	50	18	20	16	13	50*
7	B	2 2 (iii)	KU	67	30	5	67*	18	10
8	D	2 4 (i)	KU	23	15	11	56	11	23*
9	D	1 4 (i)	PS1	74	28	8	7	11	74*
10	B	1 3 (ii)	PS1	89	25	6	89*	3	2
11	C	1 3 (iii)	KU	97	8	1	1	97*	1
12	B	1 3 (ii)	PS1	81	23	6	81*	8	5
13	B	1 3 (ii)	PS4	42	34	4	42*	37	17
14	A	1 3 (ii)	KU	88	28	88*	4	5	3
15	A	1 4 (iv)	KU	82	27	82*	3	12	2
16	B	1 4 (v)	PS6	40	16	34	40*	19	6
17	D	1 2 (iv)	KU	72	22	5	11	12	72*
18	D	3 1 (i)	KU	61	31	13	20	6	61*
19	C	3 1 (ii)	PS5	25	16	5	15	25*	55
20	A	3 1 (iii)	KU	76	31	76*	9	13	1
21	C	3 1 (ii)	PS5	60	29	7	19	60*	14
22	B	3 2 (i)	PS1	74	29	6	74*	9	11
23	D	3 2 (ii)	KU	47	24	14	22	17	47*
24	D	3 3 (ii)	KU	34	19	8	29	29	34*
25	C	3 2 (i)	PS1	95	19	1	2	95*	3



Biology Intermediate 2 2009

Section A

Number of persons in test : 6876
 Average test score : 15.46
 Average facility value : 61.86
 Reliability : 0.70

Item	Key	Content Area	Ability	Fac	Disc	% Choosing Option			
						A	B	C	D
1	A	1 a (ii)	KU	93	15	93*	1	2	5
2	A	1 a (ii)	KU	77	6	77*	7	9	7
3	C	1 c 2	PS1	80	19	0	2	80*	17
4	A	1 c 1 (iii)	PS6	58	27	58*	8	3	30
5	A	1 a (ii)	PS3	39	14	39*	49	8	4
6	C	1 d 2 (i)	PS4	33	17	16	4	33*	47
7	B	1 e 2 (i)	PS6	46	20	13	46*	21	19
8	D	1 e 2 (ii)	KU	75	32	5	3	16	75*
9	B	2 a 1 (ii)	KU	39	41	8	39*	12	41
10	D	2 a 2 (ii)	PS6	5	19	61	32	1	5*
11	C	2 b 2 (iii)/(iv)	KU	62	34	6	5	62*	27
12	B	2 b 2 (v)	PS3	72	35	12	72*	7	9
13	D	2 b 2 (v)/(vi)	KU	59	31	33	3	4	59*
14	C	2 b 2 (vii)	PS3	55	29	9	22	55*	14
15	C	2 b 2 (x)	KU	61	7	25	12	61*	3
16	D	2 b 2 (xiii)	KU	59	21	17	18	7	59*
17	C	3 a 1 (ii)	KU	78	29	7	2	78*	14
18	B	3 a 2 (i)	KU	88	14	5	88*	3	4
19	A	3 a 2 (ii)	PS1+3	64	34	64*	15	14	6
20	D	3 a 2 (iii)	KU	44	35	24	18	14	44*
21	C	3 a 2 (v)	KU	84	29	12	2	84*	2
22	A	3 b (i)	KU	84	28	84*	13	2	1
23	B	3 b (iii)	PS3	77	28	8	77*	8	7
24	D	3 c 2 (i)	KU	53	30	17	19	11	53*
25	D	3 d 1 (i)	KU	63	20	4	13	19	63*



Biology Higher Level 2009

Section A

Number of persons in test : 9076
 Average test score : 20.47
 Average facility value : 68.23
 Reliability : 0.79

Item	Key	Content	Area	Ability	Fac	Disc	% Choosing Option			
							A	B	C	D
1	B	1 a	(i)	KU	77	22	7	77*	9	6
2	A	1 a	(ii)	KU	74	31	74*	3	9	14
3	D	1 a	(ii)	PS6	46	33	10	18	25	46*
4	B	1 b 1	(i)	PS3	64	36	4	64*	23	9
5	B	1 b 1	(iii)	PS	74	37	7	74*	8	10
6	C	1 c	(i)	KU	88	31	5	2	88*	5
7	C	1 c	(ii)/(iii)/(iv)	KU	90	25	3	6	90*	1
8	D	1 d	(i)	KU	42	28	36	13	8	42*
9	B	1 d	(ii)	KU	77	29	6	77*	5	12
10	B	1 e	(iii)	KU	69	23	23	69*	6	1
11	C	2 a 2	(iii)	PS3	60	31	17	5	60*	18
12	A	2 a 1	(iii)	KU	65	37	65*	12	19	4
13	D	2 a 3	(v)	KU	66	36	15	14	5	66*
14	A	2 a 3	(iv)	KU	62	34	62*	17	6	15
15	C	2 b 2	(i)	KU	88	22	5	4	88*	3
16	B	2 b 2	(iii)	KU	88	23	6	88*	4	1
17	C	2 c 1 A	(i)	KU	71	27	17	9	71*	4
18	D	2 c 2 A	(ii)	PS6	68	37	3	18	11	68*
19	A	2 c 3 A	(i)	KU	75	30	75*	0	13	11
20	D	2 c 3 a	(iii)	PS7	74	18	5	9	11	74*
21	D	3 a 2	(ii)	KU	64	32	15	11	10	64*
22	B	3 a 3	(ii)	KU	64	38	13	64*	13	10
23	D	3 a 3	(ii)	PS	33	25	9	52	6	33*
24	A	3 a 4	(iv)	PS7	91	24	91*	2	3	4
25	C	3 b	(ii)	KU	82	24	4	3	82*	10
26	A	2 f	(ii)	PS6	55	27	55*	22	22	1
27	A	3 b	(iii)	KU	66	40	66*	13	9	12
28	C	2 e	(iii)	PS3	64	29	7	23	64*	6
29	C	3 b	(iv)	KU	42	28	10	35	42*	12
30	D	3 b	(v)	KU	67	34	14	4	16	67*



Biology Advanced Higher 2009

Section A

Number of persons in test : 2065
 Average test score : 18.20
 Average facility value : 72.80
 Reliability : 0.68

Item	Key	Content Area	Ability	Fac	Disc	% Choosing Option			
						A	B	C	D
1	A	1 a (i)	KU	90	12	90*	9	1	0
2	B	1 a (ii)	KU	95	15	1	95*	2	2
3	B	1 b (iv)	KU	62	36	10	62*	4	23
4	D	1 b (iv)	KU	81	28	9	5	5	81
5	A	1 a (ii)	PS3	14	26	14*	83	2	1
6	A	1 b (iv)	PS7	59	34	59*	3	8	30
7	C	1 c (i)	KU	82	27	1	15	82*	2
8	D	1 c (i)	KU	80	25	3	9	7	80*
9	C	1 c (i)	PS6	61	16	19	8	61*	12
10	A	1 d (iv)	KU	85	20	85*	9	3	2
11	D	1 d (iii)	PS3	62	31	8	19	10	62*
12	C	1 d (i)	PS3	79	31	3	7	79*	11
13	B	2 a 1 (ii)	PS7	76	13	2	76*	13	10
14	A	2 a 1 (i)	PS3	78	35	78*	4	7	11
15	D	2 a 2 (i)	KU	73	26	5	6	16	73
16	C	2 a 2 (i)	KU	48	22	19	23	48*	10
17	B	2 a 2 (ii)	KU	57	33	19	57*	8	15
18	D	2 a 2 (ii)	KU	66	33	5	15	13	66*
19	A	2 b 1 (i)	KU	91	15	91*	2	0	6
20	C	2 b 2 (iii)	KU	96	16	0	4	96*	0
21	B	2 b 2 (iii)	PS4	53	15	16	53*	19	11
22	A	2 b 3 (ii)	KU	77	35	77*	5	10	7
23	C	2 a 1 (i)	PS3	80	25	13	4	80*	2
24	B	2 c (i)/(iii)	KU	96	19	3	96*	0	0
25	D	2 c (iv)	PS6	76	25	4	7	13	76*



Biotechnology Intermediate 2 2009

Section A

Number of persons in test : 76
 Average test score : 12.79
 Average facility value : 51.16
 Reliability : 0.77

Item	Key	Content Area	Ability	Fac	Disc	% Choosing Option			
						A	B	C	D
1	A	1 a (iv)	KU	45	31	45*	12	8	34
2	D		PS	46	36	38	11	5	46*
3	B	1 a (v)	KU	57	43	5	57*	11	28
4	A	1 a (ii)	KU	75	32	75*	5	14	4
5	C		PS	76	7	1	1	76*	21
6	D	1 b (iii)	KU	63	32	3	22	12	63*
7	B		PS	58	34	32	58*	11	0
8	C		PS	20	37	13	47	20*	18
9	C	1 c (i)	KU	55	42	28	13	55*	4
10	C		PS	55	42	14	25	55*	5
11	A	3 b (i)	KU	36	25	36*	45	12	8
12	B	3 e	KU	61	43	29	61*	1	9
13	A	3 e	KU	18	-9	18*	22	21	37
14	C		PS	58	31	11	17	58*	14
15	D		PS	70	30	14	5	11	70*
16	D	3 c (ii)	KU	29	43	34	22	14	29*
17	B	3 c (i)	KU	41	4	25	41*	18	16
18	C	3 a (iii)	KU	53	38	7	41	53*	0
19	B	2 b (ii)	KU	29	17	51	29*	17	3
20	C	1 b (v)	KU	39	6	7	24	39*	30
21	B	3 b (i)	KU	58	34	18	58*	17	7
22	A	3 a (iii)	KU	55	53	55*	12	8	25
23	B	3 d (iii)	KU	66	43	13	66*	11	11
24	D		PS	39	19	16	17	28	39*
25	D		PS	78	28	14	1	7	78*



Biotechnology Higher 2009

Section A

Number of persons in test : 28
 Average test score : 21.75
 Average facility value : 72.50
 Reliability : 0.83

Item	Key	Content Area	Ability	Fac	Disc	% Choosing Option			
						A	B	C	D
1	D	1 a (i)/(ii)	KU	86	73	0	0	14	86*
2	C	1 a (ii)	KU	50	48	32	11	50*	7
3	A	1 a (iv)	KU	64	24	64*	14	4	18
4	B	1 b 2 (ii)	PS3	71	-1	4	71*	18	7
5	D	1 b 3 (i)	PS3	89	75	4	4	4	89*
6	B	1 b 3 (v)	PS3	54	49	4	54*	0	43
7	A	1 b 1	KU	79	59	79*	11	4	7
8	C	1 b 3 (i)	PS3	75	63	7	4	75*	14
9	D	1 b 3 (vi)	KU	57	50	25	18	0	57*
10	A	1 c (i)	KU	68	45	68*	14	14	4
11	B	1 d (ii)	KU	75	36	14	75*	0	11
12	A	1 d (iii)	KU	71	68	71*	4	7	18
13	A	2 a 1 (i)	KU	75	55	75*	7	14	4
14	D	2 a 2 (iii)	KU	86	52	11	0	4	86*
15	B	2 a 2 (v)	KU	86	13	7	86*	0	7
16	D	2 a 2 (v)	PS6	71	16	18	7	4	71*
17	A	2 b 2	PS1	96	29	96*	4	0	0
18	C	2 b 2 (iii)	KU	82	23	11	4	82*	4
19	B	2 a 2 (iii)	PS3	32	26	0	32*	43	25
20	B	3 a 1 (iii)	KU	93	-14	4	93*	4	0
21	C	3 a 2 (i)/(ii)	KU	64	-14	0	18	64*	18
22	B	3 a 5 (ii)	KU	82	29	11	82*	4	4
23	C	3 a 6 (i)	KU	61	34	0	14	61*	25
24	D	3 a 2 (ii)	KU	71	32	7	11	11	71*
25	D	3 b 1 (ii)	KU	75	33	14	11	0	75*
26	C	3 b 1 (i)	PS3	82	42	0	7	82*	11
27	C	3 b 2 (iii)	KU	89	15	4	7	89*	0
28	A	3 b 2 (iv)	KU	54	31	54*	25	7	14
29	D	1 c (i)	PS6	89	21	0	7	4	89*
30	B	3 b 3 (i)	KU	46	40	32	46*	4	18



Chemistry Intermediate 1 2009

Section A

Number of persons in test : 3010
Average test score : 12.52
Average facility value : 62.59
Reliability : 0.64

Item	Key	Content Area	Ability	Fac	Disc	% Choosing Option			
						A	B	C	D
1	D	1 (a) (i)	KU	73	26	5	4	17	73*
2	A	1 (a) (ii)	KU	41	36	41*	3	26	29
3	C	1 (a) (ii)	KU	74	35	12	6	74*	7
4	B	1 (c) (i)	KU	64	10	13	64*	6	17
5	A	1 (c) (ii)	KU	39	28	39*	23	24	14
6	C	1 (c) (iii)	KU	49	24	8	16	49*	27
7	A	2 (a) (iii)	KU	92	18	92*	6	2	1
8	C	2 (b) (i)	KU	60	16	8	22	60*	10
9	B	2 (b) (ii)	KU	78	31	6	78*	12	4
10	D	2 (c) (iii)	KU	69	20	21	5	5	69*
11	A	2 (d) (i)	PS	93	16	93*	3	3	1
12	D	2 (d) (iii)	PS	53	28	6	23	18	53*
13	B	2 (d) (iv)	KU	47	19	19	47*	13	21
14	D	3 (a) (i)	KU	84	18	2	12	3	84*
15	A	3 (a) (iii)	KU	86	26	86*	8	5	2
16	C	3 (b) (ii)	PS	47	21	9	16	47*	28
17	B	3 (c) (ii)	KU	39	20	20	39*	25	16
18	C	3 (c) (vi)	KU	64	29	11	3	64*	21
19	A	3 (d) (i)	KU	27	22	27*	52	13	7
20	D	3 (d) (ii)	KU	73	20	2	10	14	73*



Chemistry Intermediate 2 2009

Section A

Number of persons in test : 4078
 Average test score : 20.23
 Average facility value : 67.43
 Reliability : 0.78

Item	Key	Content Area	Ability	Fac	Disc	% Choosing Option			
						A	B	C	D
1	A	1 (a) (i)	PS	95	22	95*	1	4	1
2	C	1 (a) (ii)	PS	69	30	23	3	69*	5
3	D	1 (b) (ii)	PS	95	20	0	1	3	95*
4	B	1 (c) (iii)	PS	89	27	5	89*	4	3
5	B	1 (a) (ii)	KU	74	33	4	74*	16	5
6	A	1 (d) (i)	KU	70	41	70*	5	16	8
7	D	1 (d) (i)	PS	81	20	13	2	4	81*
8	C	1 (d) (ii)	PS	43	5	2	47	43*	8
9	B	1 (d) (ii)	PS	48	28	27	48*	10	15
10	D	1 (d) (iv)	PS	48	36	31	8	12	48*
11	A	1 (e) (ii)	KU	44	43	44*	53	1	2
12	B	2 (a) (i)	KU	55	35	3	55*	17	25
13	C	2 (a) (i)	PS	51	19	20	16	51*	12
14	D	2 (a) (ii)	KU	77	35	7	8	8	77*
15	C	2 (b) (i)	KU	87	30	1	5	87*	8
16	A	2 (b) (i)	KU	85	28	85*	5	5	5
17	D	2 (c) (i)	PS	73	39	12	5	10	73*
18	A	2 (d) (i)	PS	37	30	37*	26	23	14
19	D	2 (e) (i)	KU	71	39	9	14	6	71*
20	A	2 (e) (iii)	KU	70	25	70*	12	15	2
21	D	3 (a) (i)	PS	81	24	10	7	3	81*
22	B	3 (b) (i)	PS	86	25	4	86*	9	1
23	A	3 (a) (iii)	KU	53	36	53*	10	11	26
24	D	3 (a) (i)	PS	46	23	4	9	41	46*
25	C	3 (b) (iv)	KU	57	42	13	10	57*	19
26	C	3 (a) (i)	PS	65	8	2	25	65*	7
27	A	3 (c) (i)	PS	80	31	80*	11	6	2
28	C	3 (c) (ii)	KU	53	47	6	12	53*	29
29	A	3 (c) (i)	PS	73	28	73*	6	12	9
		3 (c) (iv)							
30	B	3 (c) (v)	KU	67	27	7	67*	17	8



Chemistry Higher Level 2009

Section A

Number of persons in test : 9593
 Average test score : 24.81
 Average facility value : 62.02
 Reliability : 0.81

Item	Key	Content Area	Ability	Fac	Disc	% Choosing Option			
						A	B	C	D
1	D	Standard Grade	KU	73	26	8	8	11	73*
2	C	Standard Grade	KU	48	29	12	32	48*	8
3	C	Standard Grade	PS	84	25	4	7	84*	5
4	A	Standard Grade	PS	52	4	52*	25	11	12
5	D	1 (a) (i)	PS	66	43	25	2	7	66*
6	A	1 (a) (iii)	PS	58	28	58*	22	10	9
7	B	1 (b) (i)	KU	79	29	8	79*	11	2
8	D	1 (b) (ii)	KU	63	13	17	13	7	63*
9	A	1 (c)	KU	77	35	77*	7	10	5
10	B	1 (c)	PS	50	21	36	50*	10	4
11	C	1 (c)	PS	81	13	3	3	81*	12
12	C	1 (d) (i)	KU	58	44	9	11	58*	22
13	D	1 (d) (ii)	KU	75	23	6	9	10	75*
14	A	1 (d) (ii)	KU	73	25	73*	3	21	3
15	D	1 (d) (iii)	KU	60	39	6	2	32	60*
16	C	1 (d) (ii)	KU	64	42	13	13	64*	9
17	D	1 (e) (i)	PS	52	41	7	31	10	52*
18	C	1 (e) (ii)	KU	58	32	3	35	58*	3
19	B	1 (e) (iii)	PS	39	15	22	39*	15	24
20	D	2 (a) (i)	KU	64	27	12	4	20	64*
21	A	2 (b) (i)	PS	46	14	46*	10	32	13
22	C	2 (b) (ii)	KU	73	43	11	8	73*	8
23	B	2 (c) (i)	KU	79	34	6	79*	12	3
24	A	2 (e) (i)	KU	83	20	83*	4	5	8
25	B	2 (c) (ii)	PS	36	28	6	36*	40	17
26	B	2 (e) (i)	PS	56	22	9	56*	14	21
27	C	2 (e) (i)	PS	52	13	19	14	52*	14
28	A	2 (f) (i)	KU	56	46	56*	21	16	6
29	C	2 (f) (i)	KU	72	37	7	6	72*	15
30	A	2 (f) (ii)	KU	85	31	85*	5	8	2
31	D	3 (a) (i)	KU	83	16	4	5	8	83*
32	A	3 (b)	KU	80	28	80*	11	4	5
33	D	3 (c) (ii)	PS	88	26	1	1	10	88*
34	B	3 (c) (i)	PS	39	11	11	39*	44	6
35	B	3 (d) (iii)	KU	39	26	42	39*	4	15
36	D	3 (d) (iii)	KU	50	40	17	17	17	50*
37	D	3 (e) (ii)	KU	53	41	5	22	19	53*
38	B	3 (e) (iii)	KU	56	47	36	56*	5	3
39	A	3 (f) (i)	PS	35	13	35*	23	15	26
40	C	3 (f) (i)	KU	49	26	33	15	49*	3



Chemistry Advanced Higher 2009

Section A

Number of persons in test : 2143
 Average test score : 24.18
 Average facility value : 60.46
 Reliability : 0.79

Item	Key	Content Area	Ability	Fac	Disc	% Choosing Option			
						A	B	C	D
1	D	1 (a) (iii)	KU	88	19	6	4	2	88*
2	D	1 (b) (i)	KU	70	25	16	7	6	70*
3	A	1 (b) (i)	PS	74	26	74*	5	15	6
4	C	1 (b) (ii)	PS	49	24	5	35	49*	11
5	A	1 (b) (iii)	KU	75	21	75*	8	5	12
6	C	1 (c) (i)	KU	29	27	44	20	29*	7
7	D	1 (c) (i)	KU	65	-5	26	4	5	65*
8	B	1 (c) (iii)	KU	46	44	10	46*	38	6
9	D	2 (a)	PS	58	40	26	8	8	58*
10	C	2 (a)	PS	64	27	5	19	64*	11
11	D	2 (a)	PS	28	10	20	10	41	28*
12	D	2 (b) (i)	PS	80	31	8	4	9	80*
13	A	2 (b) (i)	KU	70	25	70*	8	12	9
14	A	2 (b) (ii)	PS	33	6	33*	4	61	2
15	B	2 (b) (iii)	KU	72	35	7	72*	12	8
16	C	2 (b) (iii)	PS	33	23	32	20	33*	14
17	A	2 (d) (ii)	KU	84	28	84*	3	2	11
18	A	2 (d) (ii)	PS	52	33	52*	12	31	5
19	D	2 (d) (ii)	PS	64	32	10	14	11	64*
20	B	2 (f)	KU	84	34	10	84*	6	0
21	B	2 (f)	PS	85	35	1	85*	6	8
22	C	3 (a) (ii)	KU	46	19	14	5	46*	35
23	A	3 (a) (ii)	KU	61	36	61*	8	12	19
24	C	3 (a) (ii)	PS	63	21	8	3	63*	26
25	B	3 (b) (i)	PS	56	15	30	56*	6	8
26	D	3 (b) (i)	PS	69	28	17	7	8	69*
27	D	3 (b) (i)	PS	59	18	5	26	10	59*
28	A	3 (b) (ii)	KU	52	42	52*	14	9	24
29	C	3 (b) (ii)	KU	78	33	7	9	78*	6
30	C	3 (b) (ii)	KU	68	44	8	15	68*	8
31	B	3 (b) (iii)	KU	72	41	10	72*	3	16
		Higher							
32	C	3 (b) (iii)	PS	35	4	24	30	35*	11
33	C	3 (b) (v)	PS	51	37	23	19	51*	7
34	D	3 (b) (iv)	PS	65	34	11	7	16	65*
35	B	3 (b) (v)	KU	41	29	17	41*	25	17
36	A	3 (b) (v)	PS	62	29	62*	13	9	16
37	B	3 (b) (iv)	KU	16	-6	54	16*	14	15
38	B	3 (c)	PS	71	40	6	71*	17	7
39	C	3 (d) (ii)	KU	60	30	21	11	60*	8
40	C	3 (e)	KU	91	24	7	1	91*	1



Human Biology Higher Level 2009

Section A

Number of persons in test : 3975
 Average test score : 19.94
 Average facility value : 66.48
 Reliability : 0.75

Item	Key	Content Area	Ability	Fac	Disc	% Choosing Option			
						A	B	C	D
1	D	1 a (ii)	KU	71	34	12	7	10	71*
2	B	1 f 1 (ii) 2 d (i)	KU	77	22	7	77*	6	10
3	C	1 c (i)	KU	79	35	10	5	79*	6
4	A	1 c (ii)/(iii)	KU	36	22	36*	10	26	28
5	C	1 c (iii)	PS3	41	32	33	20	41*	7
6	D	1 e (iii)	KU	66	21	21	5	8	66*
7	C	1 f 2 (i)	PS1	49	25	27	11	49*	13
8	A	1 f 2 (ii)	PS3	73	35	73*	7	18	2
9	B	2 b (iii)	PS7	63	16	6	63*	8	22
10	D	2 a (i)	KU	82	29	11	1	6	82*
11	A	2 a (ii)	KU	77	24	77*	6	14	2
12	B	2 a (ii)	KU	65	25	2	65*	30	2
13	C	2 d (ii)	KU	85	28	9	4	85*	2
14	C	2 d (ii)	KU	76	41	11	7	76*	6
15	D	2 e (iii)	PS3	59	29	6	13	22	59*
16	D	2 c (ii)	KU	73	30	12	10	5	73*
17	A	2	PS1	61	32	61*	33	4	2
18	B	2 c (ii)	KU	60	32	5	60*	16	19
19	C	2 e (iii)	KU	73	23	9	6	73*	13
20	A	2 f (ii)	KU	63	36	63*	12	10	14
21	A	2 f (ii)	PS6	52	23	52*	27	20	1
22	B	3	KU	98	15	0	98*	1	1
23	A	3 a (i)	KU	85	21	85*	9	2	3
24	B	3 b 1 (i)	PS1	35	14	56	35*	5	3
25	C	3 a (iii)	KU	61	22	21	6	61*	13
26	D	3 b 2 (iv)	PS3	55	7	9	34	2	55*
27	D	3 C 3 (iii)	KU	77	32	4	13	5	77*
28	C	3 c 3 (iii)	KU	82	28	7	6	82*	5
29	B	3 c 3 (ii)	KU	51	31	14	51*	18	17
30	B	3 e 1 (i)	PS7	70	19	15	70*	11	4



Mathematics Higher Level 2009

Section A

Number of persons in test : 19566
 Average test score : 33.59
 Average facility value : 83.97
 Reliability : 0.78

Item	Key	Content Area	Fac	Disc	% Choosing Option			
					A	B	C	D
1	A	A 11	98	19	98*	0	1	1
2	B	G 9	88	28	4	88*	5	3
3	D	G 7	69	30	23	4	4	69*
4	C	C 4	83	41	6	5	84*	6
5	B	G 1,2	75	37	19	75*	3	3
6	A	A 13	94	26	94*	2	1	3
7	A	T 8	60	52	61*	6	24	10
8	D	C 2	68	41	11	17	3	68*
9	A	G 12	63	47	63*	7	18	11
10	B	A 7	77	28	9	77*	9	5
11	B	A 3	38	27	19	38*	28	14
12	C	A 17	57	29	23	15	57*	5
13	B	T 12	72	35	19	72*	4	5
14	C	A 1	51	28	8	13	52*	27
15	A	G 2	67	40	68*	12	6	14
16	B	C 16	77	41	12	78*	3	7
17	A	G 18	30	27	31*	35	7	26
18	D	C 21	78	44	4	16	3	78*
19	C	A 16	61	26	15	9	62*	15
20	C	C 6	52	37	6	6	52*	36



Physics Intermediate 1 2009

Section A

Number of persons in test : 2468
 Average test score : 13.91
 Average facility value : 69.55
 Reliability : 0.67

Item	Key	Content Area	Ability	Fac	Disc	% Choosing Option				
						A	B	C	D	E
1	C	1.1.5	KU	63	42	7	5	63*	23	2
2	D	4.1.4 / 1.1.7	KU	85	21	1	7	4	85*	3
3	B	1.2.3	KU	77	23	7	77*	4	11	1
4	C	1.3.3	KU	77	24	4	14	77*	1	3
5	B	2.1.11	KU	67	26	7	67*	6	2	18
6	D	2.3.2	KU	78	28	3	10	5	78*	4
7	E	2.1.17	KU	53	16	20	11	12	4	53*
8	B	3.4.2	KU	66	27	18	66*	10	6	1
9	E	3.3.1/2/3	KU	69	29	2	6	5	17	69*
10	A	3.3.5	KU	59	36	59*	9	20	10	1
11	E	4.1.7	KU	43	24	12	7	26	10	43*
12	C	4.3.4	KU	89	23	2	4	89*	2	2
13	E	4.1.6	PS	45	23	8	2	33	12	45*
14	D	5.1.6	KU	72	34	9	12	3	72*	2
15	A	5.2.4	PS	93	17	93*	1	0	0	6
16	B	5.1.9/11	PS+	69	17	6	69*	2	7	15
17	E	5.3.1	KU	79	25	2	1	11	7	79*
18	D	6.1.7	KU	50	18	10	6	2	50*	32
19	A	6.1.9	KU	73	20	73*	21	2	2	1
20	C	6.1.6/8	PS	84	27	8	3	84*	3	2



Physics Intermediate 2 2009

Section A

Number of persons in test : 3770
 Average test score : 14.04
 Average facility value : 70.20
 Reliability : 0.78

Item	Key	Content Area	Ability	Fac	Disc	% Choosing Option				
						A	B	C	D	E
1	C	1.1.5 / 1.3.4	KU	88	25	2	6	88*	3	0
2	C	1.1.2	KU	77	40	16	4	77*	1	3
3	E	1.1.12	PS+	56	38	12	17	7	7	56*
4	A	1.2.19	KU	43	39	43*	9	22	12	13
5	B	1.2.15	KU	86	24	1	86*	8	1	5
6	B	1.3.7/8	PS+	61	37	8	61*	8	10	11
7	D	1.4.3/4	PS	46	24	28	10	10	46*	7
8	E	2.1.1	KU	39	23	6	42	8	5	39*
9	B	2.1.3 / 2.2.4	PS	79	42	5	79*	4	7	4
10	E	2.1.7/10	PS+	45	34	11	8	18	17	45*
11	B	2.2.5	KU	76	43	8	76*	8	1	7
12	D	2.4.1/7	KU	93	22	5	1	0	93*	1
13	A	2.4.11	KU	89	30	89*	10	1	0	0
14	D	3.1.6	KU	69	37	6	4	10	69*	10
15	C	3.1.8	KU	80	36	7	2	80*	3	8
16	E	3.3.3	KU	75	38	3	5	12	5	75*
17	E	4.1.1	KU	87	35	4	6	2	1	87*
18	A	4.1.4/5/6	KU	69	39	69*	5	15	5	5
19	D	4.2.3	KU	78	38	6	5	6	78*	4
20	C	4.4.3	KU	67	43	7	17	67*	6	2



Physics Higher Level 2009

Section A

Number of persons in test : 8994
 Average test score : 12.89
 Average facility value : 64.47
 Reliability : 0.79

Item	Key	Content Area	Ability	Fac	Disc	% Choosing option				
						A	B	C	D	E
1	B	1.1.3	KU	64	31	10	64*	7	9	10
2	C	1.2.3 / 1.1.8	PS	40	30	5	6	40*	32	17
3	B	1.3.4	PS	63	34	10	63*	16	5	6
4	D	1.3.2/3	PS	68	48	1	29	2	68*	1
5	C	1.4.5	PS+	52	37	5	37	52*	2	3
6	A	1.5.1	PS	62	35	62*	5	14	14	4
7	C	1.6.3	KU	64	21	3	1	64*	28	5
8	D	2.1.6	KU	64	43	6	3	5	64*	21
9	C	2.1.18	PS	78	43	5	2	78*	14	1
10	B	2.1.16	PS	68	34	8	68*	11	12	2
11	C	2.3.5	KU	85	32	9	1	85*	4	1
12	A	2.3.12	KU	70	41	70*	10	3	9	8
13	C	2.4.11	KU	79	34	4	7	79*	7	3
14	D	3.1.14	PS	60	36	5	13	7	60*	14
15	E	3.2.11	PS	71	41	3	21	1	3	71*
16	B	3.3.18/19/21	KU	46	20	6	46*	10	9	30
17	D	3.3.25/26	PS	38	32	10	13	19	38*	20
18	E	3.3.28	KU	65	38	6	9	17	3	65*
19	A	3.5.2	KU	66	34	66*	11	9	9	5
20	E	3.5.9	PS+	87	36	4	4	3	2	87*



Scottish Qualifications Authority

Notes for Guidance on Statistical Data on Objective Tests

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; ie the fraction of candidates 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 candidates apart. The result ranges from -100 through 100 and a high value means that able candidates (high total test score) tend to answer the question correctly and candidates 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 candidates 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 candidates selecting it. Percentages have been corrected to the nearest whole number. Correct options are asterisked.