Question Bank Adv Higher Chemistry

Self Evaluation Question Bank

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Past Paper Question Bank

Section 1a: Electromagnetic Radiation & Atomic Spectra

Outcome	Old AH 2001	Old AH 2002	Old AH 2003	Old AH 2004	Old AH 2005	Old AH 2006	Old AH 2007	Old AH 2008	Old AH 2009	Old AH 2010	Old AH 2011	Old AH 2012	Old AH 2013	Old AH 2014	Old AH 2015
1 2 4											L2a				
3	mc1 mc22		mc1				mc3 mc5					mc1	mc2 mc3 mc4		mc1
5															
6 7 9															
8 13 14															
10 11 12		L1d		L5e	L13e	L4a		L3c	L1b	mc5 L1a	L2b	L1a(i)	L4d	mc1 mc2	L1b
15 16															
17 18						mc6									
19 20					mc4 mc5	mc1			mc1			mc5			mc3
21													mc7		

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Section 1b: Atomic Orbitals and Electronic Configurations

Outcome	Old AH 2001	Old AH 2002	Old AH 2003	Old AH 2004	Old AH 2005	Old AH 2006	Old AH 2007	Old AH 2008	Old AH 2009	Old AH 2010	Old AH 2011	Old AH 2012	Old AH 2013	Old AH 2014	Old AH 2015
22 23 24															
25															
26						L3c	mc10								
27															
28a															
28b						L3d									
28c															
28d															
29a	mc11	g32b		mc1	mc3	mc7	mc4			mc1				mc3	
29b															L1a(ii)
29c			mc6				mc9						mc5		
30						L3b									L1a(i)
31															
32		g32a g32c				L3a			L1a						
33					mc1			mc1		mc2					
34 35 36				L1a L1b	mc2		L7b			mc4	mc1		mc1 mc6		
37 38						mc5				L1b(i) L5b	mc3		mc10		
39 40				mc6 mc7				L1a	mc4			L4a			
41 42	g32a g32b	mc21 L2a		mc2	mc9	mc2	mc6		L12b	mc6 L1b(ii)	mc9	mc6	mc11	mc7 L1d	mc2 mc6
43		L2b						L1b							

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Section 1c: Transition Metals

Outcome	Old AH 2001	Old AH 2002	Old AH 2003	Old AH 2004	Old AH 2005	Old AH 2006	Old AH 2007	Old AH 2008	Old AH 2009	Old AH 2010	Old AH 2011	Old AH 2012	Old AH 2013	Old AH 2014	Old AH 2015
44															
45							L7a(i)								
46	L1a	L1c	mc7	mc8	L3b		L7a(ii)	mc11 L2b(iii)			L4a	mc2 mc3	L5b		mc2 L3b(iii)
47 48	mc5	mc19	mc4				L9b(i)		L12a		L3a	L2a		mc8 L2c	L3b(i)
49 50															L3b(ii)
51 52				L5c				mc10					mc14		L3b(iv)
53							L9b(ii)								
54 55					L3a		L9a	L4a(i) L4a(ii)				mc12			
57	mc9		mc5 L4a											L4a	
56 58		mc18		L5b	L5a(i)		L9c	L2b(i) L2b(ii)	mc8	L2a L2b L2c	L4c	L2c	L5c	L4b	mc9
59 60 61	L1b L1c(i) L1c(ii)			L5d											
62															
63 64 65	mc2 mc3 L1c(iii)		mc2	mc9				L2a			mc10		L5a	L4c	
66 67 68															
69a															
69b 70															

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Section 2a: Chemical Equilibrium

Outcome	Old AH 2001	Old AH 2002	Old AH 2003	Old AH 2004	Old AH 2005	Old AH 2006	Old AH 2007	Old AH 2008	Old AH 2009	Old AH 2010	Old AH 2011	Old AH 2012	Old AH 2013	Old AH 2014	Old AH 2015
71 72	mc8	mc1 L4d	mc13	mc12 mc13	mc13	mc11		mc13		mc11 L7a	mc12		mc18	mc11	
73							L2a								
74 76		L4c	mc13				L2b		mc10	L7b	mc13	mc10		mc12 mc13	L5a(i)
75					mc21										
77															
78								mc12							
79					mc14		mc14	mc14	mc12			mc8			L5a(ii)
80															
81				mc2 ?				mc3 ?							
82															
83															
84 85	L4a+b+c				mc15										
86												mc12			
87															
88			mc17					mc15							
89 90 91	L6a	L5b			18a	L5c	L3a+b	mc16	L6a(i)	mc13	mc16	L7c			
92															
93 94															
95										L8a					
96															
97			mc16										mc21		mc14
98					L8b L8c	mc14 L5a		L9a L9b	L6a(ii)						
99		L10c	L11a			L5b	L3c		mc16 L6b	L8b		L7a	L6a		
100					mc16										
101															
102															
103				L8a							L9a				
104					mc17			L9c	mc15		L9b	mc11			mc13
105	L6b(iii)	L10d	L11b											L12b	
106	L6b(i) L6b(ii)			L8b		mc13					L9c		L6b	L12a	
107															
108			L12a												
109 110 111 112 113			L12b		mc18	mc15									
114	mc13	mc11	mc15					L9d		mc14		mc13	mc23		

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Section 2b: Reaction Feasibility

Outcome	Old AH 2001	Old AH 2002	Old AH 2003	Old AH 2004	Old AH 2005	Old AH 2006	Old AH 2007	Old AH 2008	Old AH 2009	Old AH 2010	Old AH 2011	Old AH 2012	Old AH 2013	Old AH 2014	Old AH 2015
115															mc15
116															
117		L3a		L3a		L1a(i)		L5a(i)	L2b	L3a				L3a(i)	L2a
118 119 120 121	g31a L9d	mc13 mc13	mc26	mc21	mc20	mc20	mc20	mc19	mc18 mc19		mc23 mc24	mc21	mc27 mc28		mc21
122															
123 124															
125								mc18							mc18
126															
127		L3b	L10a			L1a(ii)	L1a	L5a(ii)	L2a	L3b			L2a	L3a(ii)	L2b
128	mc14				mc22 mc23			L5a(iii)		L3c		L3d(i) L3d(ii)	L2b		
129			mc22	mc22			mc22								
130															
131				Mc15											
132 135	g31b g31c	Mc10		Mc23	Mc21										
133		L3c		L3b L3c		L1a(iii)	L1b		L2c			mc20		L3b	L2c
134															
136															

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Section 2c: Kinetics

Outcome	Old AH 2001	Old AH 2002	Old AH 2003	Old AH 2004	Old AH 2005	Old AH 2006	Old AH 2007	Old AH 2008	Old AH 2009	Old AH 2010	Old AH 2011	Old AH 2012	Old AH 2013	Old AH 2014	Old AH 2015
137															
138 139	L8c	L5a(i)	mc21		L7b(i)	L7b	mc24 L4a				L7b	L10a L10b	L8a	L10a L11d	mc26 L5b(i)
140 141 142		mc14 L5a(ii)	L9a		mc25 L7b(ii)	mc25	L4b		mc21				L8b	L10b(i)	
143				L7c(i)		L7c		L10d(i)	mc20	L9c	L7a				
144														mc24	mc25
145			L9b	L7c(ii)	L7b(iii)	L7d	L4c	L10d(ii)		L9d	L7c	L10c	L8c	L10b(ii)	L5b(ii)
146 147	mpc7	L5a(ii)		mc27		mc24			L7a	L9a L9b				mc23	mc24
148	L8b							L10d(iii)						L10c	

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Section 1a: Electromagnetic Radiation & Atomic Spectra

Outcome	Exemplar Paper	Speciman 2015	AH 2016	AH 2017	AH 2018	AH 2019	AH 2021	AH 2022	AH 2023	AH 2024	AH 2025		revised AH 2013	revised AH 2014	revised AH 2015
1 2 4															
3		mc3	mc1		mc1								(mc2) (mc3) (mc4)		(mc1)
5															
6 7 9															
8 13 14						L5a									
10 11 12	L1a	L1c	L6a	L1b	L1a L5c(i)	L5c(i) L7d(ii)C							(L4d)	(mc6) L1a(ii)	
15 16														L1d	
17 18	mc2														
19 20	L1c	L1a L1b		L1a(i) L1a(ii)	L5a	mc1								L1a(i)	(mc2)
21		L4c(i)			L10c(i)A L10c(i)B	L3a(ii) L3a(ii) L3a(iii)							(mc7)		

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Section 1b: Atomic Orbitals and Electronic Configurations

Outcome	Exemplar Paper	Speciman 2015	AH 2016	AH 2017	AH 2018	AH 2019	AH 2021	AH 2022	AH 2023	AH 2024	AH 2025		revised AH 2013	revised AH 2014	revised AH 2015
22 23 24															
25					mc3										
26		L4b(ii)	L2b												
27															
28a															
28b	mc1	mc1			mc2	mc4								mc1 L1c(iii)	
28c			L2c												
28d	L1b(iii)			mc3	L2b(ii)	L1a									
29a			mc2		L1b(i)									mc2 (mc10)	
29b	L1b(ii)	L4a(iii)												L1c(ii)	
29c													mc5	mc5 L1b	
30		L4b(i)											L1a		
31															
32	L1b(i)		L2a	mc2									L1b	L1c(i)	
33			mc3												
34 35 36													(mc6) (mc1)		
37 38													(mc8)		
39 40															
41 42	mc4 mc5	mc3	mc4	L2b(i)	mc4	mc5							(mc9)	(mc9)	(mc4)
43				L2b(ii)											

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Section 1c: Transition Metals

Outcome	Exemplar Paper	Speciman 2015	AH 2016	AH 2017	AH 2018	AH 2019	AH 2021	AH 2022	AH 2023	AH 2024	AH 2025		revised AH 2013	revised AH 2014	revised AH 2015
44															
45		L4a(ii)		L4a(ii)	L10b	mc6									
46			L3a(iii)										L5c(ii)	(mc11)	(L5b(iii))
47 48		L4a(i)		L4a(i)	mc6	mc7									(L5b(i))
49 50															(L5b(ii))
51 52													(mc5)		(L5b(iv))
53															
54 55		L11a(i)		L6a(ii)	L6a L6b(ii)A L6b(ii)B	mc8									mc7
57	L5b(i)		L3b(i)	mc4 L6a(i)									L5a		mc8
56 58	mc3	mc4	mc16	mc5		L5b(i)							L5c(i)		
59 60 61															
62			L3a(ii)												
63 64 65	L6b(ii)		L3a(i) L3b(iii)		mc5	L5b(ii)							L5d(i) L5d(ii) L5d(iii)	mc4	mc9
66 67 68															
69a				L4b(ii)B											
69b 70															

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Section 2a: Chemical Equilibrium

Outcome	Exemplar Paper	Speciman 2015	AH 2016	AH 2017	AH 2018	AH 2019	AH 2021	AH 2022	AH 2023	AH 2024	AH 2025		revised AH 2013	revised AH 2014	revised AH 2015
71 72					mc7 mc10	L1c							(mc18)		
73					L2a(i)										
74 76		mc5		L2a(i)											(L6a(i))
75			L7a												
77															
78	mc8			L2a(ii)		mc9									
79															(L6a(ii))
80															
81															Mc3 ?
82															
83															
84 85															
86															
87															
88					mc9										
89 90 91		L2a	mc6		mc8	L4a+b									
92															
93 94															
95	mc10			L6b(ii)	L2a(ii)								mc17		
96															
97		mc6													
98		mc9 L2b	L5a			L4b(i)									
99	L4a		L5b	mc7	L2b(i)	L4b(ii)							(L6a)		
100	mc9	L2c	L9b(iii)		mc11										mc20
101				L6b(i)											
102															
103															
104			mc8		mc12										(mc21)
105	L4b(ii) (3marks)					L4d (3marks)								(L13b)	
106	L4b(i)	mc7											(L6b)	(L13a)	
107															
108															
109 110 111 112 113			mc7			L4d (3marks)									
114	mc7	mc8		mc6									(mc18)		

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Section 2b: Reaction Feasibility

Outcome	Exemplar Paper	Speciman 2015	AH 2016	AH 2017	AH 2018	AH 2019	AH 2021	AH 2022	AH 2023	AH 2024	AH 2025		revised AH 2013	revised AH 2014	revised AH 2015
115		mc10	mc9												
116															
117														(L3a(i))	(L2a)
118 119 120 121			L1a(i)	L3a(i)A	L4d(i)A	mc11							(mc20)		
122	mc12	mc11	mc10			mc12							mc19		
123 124															
125	mc11														(mc22)
126															
127	L2a	L7a	L1a(ii)	L3a(i)B	L4d(i)B									(L3a(ii))	(L2b)
128	L2b	L7b		mc8	mc13	L1b									
129	L2c					mc10									
130															
131															
132 135															(mc24)
133		mc12	L1b	L3a(ii)	L4d(ii)									(L3b)	(L2c)
134															
136															

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Section 2c: Kinetics

Outcome	Exemplar Paper	Speciman 2015	AH 2016	AH 2017	AH 2018	AH 2019	AH 2021	AH 2022	AH 2023	AH 2024	AH 2025		revised AH 2013	revised AH 2014	revised AH 2015
137															
138 139	mc13 L3a	L9a	L6b(i)	mc9		L2a						mc13 L3a		(L11a)	(L6b(i))
140 141 142	L3b	L9b	L6b(ii)	L4b(i)	L9d(i)	mc13 L2b(ii)						L3b		(L11b(i))	
143						L2b(i)									
144	mc14	mc13										mc14		(mc13)	
145	L3c	L9c	L6b(iii)	mc10	L9d(ii)	mc14						L3c		(L11b(ii))	(L6b(ii))
146 147		mc14	mc11	L4b(ii)A	mc14	L2c								(mc14)	
148															