0620 Chemistry Paper 3 (Extended)

Paper 32 O/N/10

Question	Content	Chemistry for You Reference	
		Chapter	Page no.
1	properties of elements and compounds	4,21	44, 266
2	zinc and zinc blende chemistry, distillation	8,2,23	90,19,280
3	breaking down MnO_2 , rate of reaction	17,16	212,201
4	chromium and sodium compared, Cr plating	4,5,9	43,51,114
5	carbohydrates, aerobic respiration, CH_4 combustion	18,20,15	222,248,187
6	alcohols, isomers, oxidation of butan-1-ol	14,16	178→, 201
7	sulphur dioxide, define an acid, pH calculation* *relates to Chapter 28, page 363	18,12	226,155,142

Paper 32 M/J/10

Question	Content	Chemistry for You Reference	
		Chapter	Page no.
1	properties of elements	4,5	43, 50, 64
2	carbohydrates, enzymes, test for iodine	18	221-222
3	redox, rusting, galvanising	8,9	93,95,115
4	isomers, reations of but-1-ene	13,14	167,179
5	fuel cells, endo-, exo-thermic reactions	10,16	125,190→
6	Group III chemistry, thallium	12,24	144,152,309
7	Electrolysis of bauxite	9	107
8	heating nitrates, NO_2, N_2O_4 =m	11,19	134,234

Paper 3 O/N/09

Question	Content	Chemistry for You Reference	
		Chapter	Page no.
1	composition of the air, SO_2, NO_x	25,15	314,188
2	classification of oxides	4	47-48
3	zinc reactions, galvanising, electrolysis of Zn/Cu	8,9	98,93,112
4	distillation, redox$(CH_3)_2S$ e-dot diagram,combustion	2,9,22	19,115,270
5	SiC compared with diamond, GeO_2 and SiO_2, GeH_4	22, 13	272, 159
6	Contact process, = m reactions, redox, calculation*	12,19,9	155,115,232
7	Butan-1-ol, cracking, ester formation, c.acid,distillaton * Chapter 28, page 354→	13,14,2	165,183,19

Paper 3 M/J/09

Question	Content	Chemistry for You Reference	
		Chapter	Page no.
1	chromatography to separate chlorophyll	2	20
2	electrolysis of molten and aqueous solutions	9	106&110
3	electronic configuration, ionic bonding	3&21	31&263
4	reactivity series	7,8	80-81&90
5	preparation of calcium fluoride	12	150
6	Haber process	19	240-241
7	bond energy, acid strength	15&19	195&238
8	ester formation, test for H_2O, >C=C<	14	183
9	calculating empirical formula, Mg_3N_2,$SiBr_4$	28	360

Paper 3 O/N/08

Question	Content	Chemistry for You Reference	
		Chapter	Page no.
1	testing for gases	check	
2	ionic (Na_3N), metallic, macromolecular (SiO_2)	21-23	263&272
3	rusting, % composition, blast furnace	9&28	91-92&360
4	neutralization, % composition, functional groups	12&28&14	143&360&183
5	electrolysis NaCl, uses of products	10	120-124
6	reactivity series, ionic equations, heating OH^-,NO_3^-*	7&12	80&152
7	alkane combustion, chlorination* cracking, polymers	13&15	165&186

* not in the book

Paper 3 M/J/08

Question	Content	Chemistry for You Reference	
		Chapter	Page no.
1	elements: formulae, +H_2O, e- configuration, valency	3&5&6	30&51&64
2	atomic structure, isotopes, periodic table	3&4	29&33&43
3	purification of copper via electrolysis	9	112
4	acids + metals, bases, carbonates, acid strength	12	142-147
5	equilibria, acidic props. of $COCl_2$*, e^- dot structure	19&22	240&270
6	rate of reaction, collision theory, fermentation	16&17	208&214
7	titration, prep. of a salt, calc. of yield	12&28	144&365&356
8	combustion, types of food, starch, nylon*	15&18	187&220&224

* not in the book

Paper 3 O/N/07

Question	Content	Chemistry for You Reference	
		Chapter	Page no.
1	separation techniques	2	18&19
2	atomic structure	3	28-32
3	ionic bonding, lattice, redox	21&9	264&267&115
4	acid rain, Contact process, extracting Zn, electrolysis	12&8&9	155&90&110
5	reversible reaction, base strength, neutralization	19&12	236&146
	testing for ions	24	309
6	alcohols, energy changes, heat of combustion,	14&15	178&194
	reversible reactions, alcohol reactions	19&14	236&183
7	marble and HCl reaction, affect of [ ], the mole	16&28	204&200&352

Paper 3 M/J/07

Question	Content	Chemistry for You Reference	
		Chapter	Page no.
1	fossil fuels, fractional distillation of oil	13	160&164
2	summary of structure and bonding	23	286
3	salt preparation ($ZnSO_4$,KCl, PbI_2)	12	146&150
4	periodic table, charges on ions, e^- dot structure	4	43&391
	properties, halogens	22&6	270&62
5	Kroll process, cathodic protection*, oxidation,	8	97&93
	electrolysis of NaCl(aq)	9	100
6	extraction of Al, uses	9	107-109
7	esterification, terylene*, unsaturation test, the mole	14&13	183&167-168
		28	354

*not in the book

Paper 3 O/N/06

Question	Content	Chemistry for You Reference	
		Chapter	Page no.
1	properties of gases	mixture	
2	melting/boiling points, conductivity	4	45
3	calcium carbonate, heating, moles, pH control	11&28	129&359
4	pollution: CH_4 combustion, SO_2, catalytic converter	15	187-188
5	Haber process, urea, dot and cross diagram	19	240/247
6	calculating mol. formula CuFeS, electrolysis Cu salt	28&9	360/112
7	rate of reaction, photosynthesis	16	200→
8	enzyme, starch hydrolysis, proteins, fats	17&18	212&224

Paper 3 M/J/06

Question	Content	Chemistry for You Reference	
		Chapter	**Page no.**
1	properties of transition elements,extraction of Fe	5&8	56-57&91&94
2	reactivity series, test for H_2, pH, group I, electrolysis	7&5&9	80&55&50&100
3	pH, electrolysis dil. H_2SO_4, oxides,	12&9&4	142&101&47
4	group IV, diamond, graphite, CO_2 and SiO_2	22&13	272-273&159
5	Contact process, uses of SO_2*, reversible reactions	12&19	154&236
6	Making, breaking bonds, nucleon number, radioactive isotopes, electrolysis, OILRIG	15&5 9	194&59 108&115 101
7	cracking, photolysis of C_4H_{10}/Cl_2**, >C=C< + Br2	13	165&167
	% yield	28	362

* on syllabus: used in the manufacture of wood pulp for paper, nucleon number = mass number

** on syllabus but not in the book

Checking the syllabus will definitely fill the gaps in your knowledge!

Complex questions must be read first then you do the parts you know.

Use your time to think about other answers.

Test for	Chapter	Page
gas		
ammonia	24	309
carbon dioxide	11	134
chlorine	10	122
hydrogen	5	55
oxygen	16	208
water	19	232
pH	12	142
C=C	13	167
ion		
chloride	12	152
bromide	12	152
iodide	12	152
sulphate	12	152
Test with		
sodium hydroxide	24	309

0620 Chemistry Alternative to practical

Paper 62 O/N/10

Question	Content	Chemistry for You Reference	
		Chapter	Page
1	naming apparatus, testing for pH	12	143
2	testing for KCl(aq), ethanol and NaOH(aq)	12,14	143,182
3	zinc carbonate and sulphuric acid, rate of reaction	16	200
4	exothermic reaction, adding solid to water	15	191
5	analysis of lead nitrate, unknown	12,24	150
6	corrosion of iron nails	8	93,309

Additional skills
Interpreting a graph
Drawing lines on a graph
Plotting a graph
Reading a thermometer

Paper 62 M/J/10

Question	Content	Chemistry for You Reference	
		Chapter	Page
1	naming apparatus, evaporating a liquid	12	144
2	analysing grass (chromatography)	2	20
3	rate of reaction: $CaCO_3$ and HCl	16	200
4	acid + alkali experiment	12,15	143,190
5	analysis of a calcium salt, testing for NO_3^-	24	309
6	electrolysis of conc. HCl, tests for H_2 and Cl_2	9	101
7	properties of metals	4	44

Additional skills
Interpreting a graph
Drawing lines on a graph
Plotting a graph
Reading a thermometer
Filling in a results table

Paper 6 O/N/09

Question	Content	Chemistry for You Reference	
		Chapter	Page
1	naming apparatus, test for oxygen	16	208
2	electroplating a spoon	9	114
3	testing for $NaNO_3$(aq), pure water and hexene	12,19,13	143,232,167
4	reaction of Mg and H_2SO_4	12	147
5	analysis of three colourless liquids: pH, adding salts	24	309
6	rate of reaction: $CaCO_3$ and HCl	16	201
7	extracting pigments from leaves: chromatography	2	20

Additional skills
Reading a thermometer
Filling in a results table
Drawing a bar chart, plotting a graph

Paper 6 M/J/09

Question	Content	Chemistry for You Reference	
		Chapter	Page
1	naming equipment, preparation of magnesium nitrate	12	146
2	neutralisation of NaOH and HCl	12	144
3	testing salts and gases	check tests	
4	effect of temperature on rate of reaction	16	206
5	testing two solids	check tests	
6	acid base indicators	12	143

Additional skills
Interpreting a graph
Drawing lines on a graph
Plotting a graph
Reading a thermometer

Paper 6 O/N/08

Question	Content	Chemistry for You Reference	
		Chapter	Page
1	naming equipment, chromatography	2	20
2	electrolysis of NaCl(aq), test for H_2, Cl_2	9	110
3	formation of ethene	13	165
4	endothermic and exothermic reactions	15	190
5	testing two salt solutions, pH, + NaOH, +NH_4OH, +$BaCl_2$	check tests	
6	solubility of potassium chlorate	12	149
7	preparation of magnesium sulphate	12	146

Additional skills
Reading a thermometer
Filling in a results table
Drawing a bar chart
Plotting a graph

Paper 6 M/J/08

Question	Content	Chemistry for You Reference	
		Chapter	Page
1	naming apparatus, preparing copper(II) sulphate	all	
2	electrolysis of lead bromide	9	106
3	preparation of sulphur dioxide, naming equipment	all	
4	iron(II) and potassium permanganate, reading a burette	28	364
5	testing two solids, pH, + NaOH	12 & 24	143 & 309
6	rate of reaction, Mg + HCl	16	200
7	test for NH_3, H_2O, distillation	2	19

Additional skills
Reading a gas syringe
Plotting a graph
Filling in a results table

Paper 6 O/N/07

Question	Content	Chemistry for You Reference	
		Chapter	Page
1	hydrated copper sulphate	19	232
2	corrosion of iron	8	92-93
3	preparation of zinc nitrate	12	146
4	measuring rates of reaction	16	201
5	sodium hydroxide + solids tests	24	309
6	rate of reaction, Mg + H_2SO_4	16	200
7	burning a fuel	15	187 &197

Additional skills
Reading a measuring cylinder
Plotting a graph

Paper 6 M/J/07

Question	Content	Chemistry for You Reference	
		Chapter	Page
1	naming apparatus (fractional distallation)	2	19
2	electrolysis of hydrochloric acid	9	110
3	chromatography (amino acid)	2	20
4	titration of sodium thiosulphate and potassium iodate	28	365
5	testing for $PbCO_3$ and a water soluble salt	check tests	
6	decomposition of H_2O_2	16	208
7	exothermic reaction of cement and water	15	190-191

Additional skills
Reading a burette
Filling in a results table
Reading a gas syringe
Plotting a graph

Paper 6 O/N/06

Question	Content	Chemistry for You Reference	
		Chapter	Page
1	naming apparatus (testing magnesium hydroxide)	all	
2	corrosion	8	92-93
3	reaction of calcium and water	5	54
4	reactions of copper(II) sulphate and metals	7	84
5	testing two solids	check tests	
6	separating a paint via filtration, chromatography	2	18-20

Additional skills
Reading a syringe
Plotting two graphs
Reading a thermometer

Paper 6 M/J/06

Question	Content	Chemistry for You Reference	
		Chapter	Page
1	naming apparatus (electrolysis)	9	110
2	separating a jam via filtration, chromatography	2	18-20
3	exothermic and endothermic reactions	15	190
4	decompostion of hydrogen peroxide	16	208
5	testing two compounds	check tests	
6	testing alkalinity of two oven cleaners	12	143

Additional skills

Reading a thermometer

Plotting two graphs

Reading a measuring cylinder