

Combined Science OCR 21<sup>st</sup> Century – Foundation Tier Revision sheet for  
November Mocks 2020

Chemistry Paper 1hr 45mins [95 marks] **FOUNDATION**

Question	Topic and Content	Total Marks
Question 1	C2. Periodic Table – Group 1 metals, metals and non- metals,	8
Q2	C5 – separation of mixtures.	11
Q3	C4. Properties of materials	10
Q4	C5 – rates of reaction, metals and acid reactions, analyzing graphs	8
Q5	C3 – reduction reactions, electrolysis, properties of ionic compounds as liquids and solids.	8
Q6	C2 – atomic structure, calculating numbers of protons, neutrons and electrons in atoms, ionic bonding, ion charges	9
Q7	C2 – properties of ionic bonding	5
Q8	C6 – particle model, enzymes definition and function	7
Q9	C1 – Gas tests, combustion reactions, reaction profiles, exothermic and endothermic reactions	10
Q10	C4- Alkanes	11
Q11	C4 – nanotubes, risks and benefits of nanotechnology	8

Biology Paper 1hr 45mins [95 marks] **FOUNDATION**

Question	Topic and Content	Total Marks
Q1	B4 – photosynthesis, B6 - food chains and sustainability	13
Q2	B1 – magnification and microscopes, B4 – respiration, gas exchange system	7
Q3	B2 – inheritance, Punnett squares, probability of getting an inherited condition, B5 – blood and red blood cells, B4 – stem cells	17
Q4	B5 – the heart and circulatory system, relationship between systems, the effect of exercise on pulse rate and recovery rate	12
Q5	B6 – evolution, species definition	5
Q6	B2 – ways to prevent the spreading of communicable disease, vaccination, electron microscopes (B1), calculations on cells, analyzing graphs, explaining correlations	22
Q7	B4 – Respiration, diffusion, osmosis, B3. Lock and key model of enzyme action, analyzing an experiment, calculating rate.	19

Physics Paper 1hr 45mins [95 marks] **FOUNDATION**

Question	Topic and Content	Total Marks
Q1	P1. waves	3
Q2	P3. Current, magnetic fields, calculations	8
Q3	P4. Forces – Kinetic Energy, work done, braking, stopping and thinking distances	9
Q4	P1. Electromagnetic spectrum	3
Q5	P3. Energy transferred, power, understanding voltage	7
Q6	P4. Speed-time graphs, speed, velocity, explaining motion	6
Q7	P5 – Radiation and radioactive decay equations, alpha, beta and gamma	10
Q8.	P4. Magnets and forces, resultant forces, forces including equations	9
Q9	P1. Waves – amplitude, wavelength, frequency, energy stores, wave speed	13
Q10.	P6. Particle model, specific latent heat	8
Q11	P3. National grid, voltage of UK plug sockets, wiring a plug	5
Q12	P6. Specific heat capacity, calculating means, improving experiments,	8
Q13	P2. Energy resources generating electricity	6

Combined Exam

- P6 – Density and measuring it.
- B1 – Gene technology and genetic engineering
- C5 – Chromatography, Rf values, chromatograms
- P1 – UV radiation, plotting graphs
- B5 – Homeostasis and body temperature regulation, neurons
- C4 – hydrocarbons and fractional distillation, combustion

*There will be lots of data interpretation in this, explaining methods, plotting graphs and calculating %s*

GCSE Combined Science B (Twenty First Century Science)			Max Mark	9-9	9-8	8-8	8-7	7-7	7-6	6-6	6-5	5-5	5-4	4-4	4-3	3-3	3-2	2-2	2-1	1-1	u	
J260	F	01 Biology	Raw	95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	55	n/a	49	n/a	37	n/a	25	n/a	12	0	
J260	F	02 Chemistry	Raw	95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	52	n/a	44	n/a	31	n/a	20	n/a	9	0	
J260	F	03 Physics	Raw	95	n/a	n/a	n/a	n/a	n/a	n/a	n/a	52	n/a	45	n/a	33	n/a	21	n/a	9	0	
J260	F	04 Combined Science	Raw	75	n/a	n/a	n/a	n/a	n/a	n/a	n/a	48	n/a	41	n/a	31	n/a	20	n/a	10	0	
J260	H	05 Biology	Raw	95	62	n/a	55	n/a	49	n/a	42	n/a	35	n/a	28	n/a	n/a	n/a	n/a	n/a	0	
J260	H	06 Chemistry	Raw	95	66	n/a	57	n/a	49	n/a	41	n/a	33	n/a	26	n/a	n/a	n/a	n/a	n/a	0	
J260	H	07 Physics	Raw	95	57	n/a	48	n/a	39	n/a	32	n/a	25	n/a	19	n/a	n/a	n/a	n/a	n/a	0	
J260	H	08 Combined Science	Raw	75	54	n/a	49	n/a	43	n/a	37	n/a	31	n/a	25	n/a	n/a	n/a	n/a	n/a	0	
J260	F	Foundation Tier: 01+02+03+04	Overall	360	n/a	n/a	n/a	n/a	n/a	n/a	n/a	207	193	179	155	132	109	86	63	40	0	
J260	H	Higher Tier: 05+06+07+08	Overall	360	239	224	209	194	180	166	152	138	124	111	98	91	n/a	n/a	n/a	n/a	n/a	0

