OCR G482a

Spec Ref	Topic	TAP episode	comments
2.1.1	**electric current a flow of charged particles, electrolytes**	101, 102, 103-1	
	$\Delta Q = I \Delta t$ the coulomb, e = 1.6 × 10-19 C	102	
	Kirchhoff's first law	117	
	mean drift velocity of charge carriers I = Anev	103, 104	
	conductors, semiconductors and insulators	111-2	Semiconductors only
2.2.2	**potential difference W = VQ, the volt, e.m.f**	105	
2.2.3	**resistance , the ohm, Ohm's law**	108	
	I–V of a resistor, filament lamp and LED	108-3, 109	
	uses and benefits of LEDs		No ref
2.2.4	**resistivity, R = ρl/A**	112	
	Temperature effects on R and NTC thermistor	110	
2.2.5	**power, P = VI, P = I^2R, P = V^2/R**	106	
	fuses		No ref
	W = IVt , kW h	115, 116	
2.3.1	**Kirchhoff's first and second laws**	117	
	Resistors in series and parallel	114	
	internal resistance terminal p.d., ε = I (R + r), ε = V + Ir	120, 121	
2.3.2	**potential divider & its use**	118	
	Use of LDR & thermistors		No ref
2.4.1	**longitudinal and transverse waves;**	309, 310	
	displacement, amplitude, wavelength, period, phase difference, frequency and speed of a wave;		Some mention in 310, but otherwise assumed
	$v = f \lambda$	311	
	reflection, refraction and diffraction of sound and light.	317	Light only
2.4.2	**electromagnetic spectrum practical uses**	314	
	UV-A, UV-B and UV-C sunscreen		No ref
	polarisation, polarisation on reflection;	313	Not specifically by reflection
	Malus's law		No ref