Practice Question Set For GCSE
Subject : Physics
Paper-1 Topic : 5_ Light And Electromagnetic Spectrum

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Name of the Student:_____
Max. Marks : 17 Marks **Time : 17 Minutes**

Mark Schemes

Q1.

	Answer	Acceptable answers	Mark
(i)	An explanation linking any three of the following: (Optical fibres) bend (1) some fibres carry light to the inside of the patient (1) some fibres transmit the reflected light (1) light passes up/down fibres by TIR (1) light is reflected inside the patient (1) image is analysed by computer (1)	Accept suitable labelling on a Diagram Image projected on a screen	**(3)**
(ii)	Either Breaks/blasts/smashes (1) Kidney stones (1) or Energy absorbed (1) to help repair muscle tissue (1) or Use of gel (1) to prevent loss of intensity (1) or	bruising/clots increases blood flow Allow (1) mark for suitable diagnosis e.g. prenatal scan	**(2)**

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Q2.

	Answer	Acceptable answers	Mark
(i)	An explanation linking the following points: black (1) (because) (good) absorber (of thermal radiation) (1)	absorbs / takes in heat radiation **ignore** references to: attract good emitter light dark / darker	**(2)**
(ii)	an explanation linking any **three** of the following points: • (bag / water) absorbs thermal energy / heat / radiation (1) • (bag / water) radiates / emits thermal energy / heat / radiation (1) • more heat radiated at higher temperature (1) • input and output are balanced (at steady temperature) (1)	idea of energy input e.g. "sun heats the bag up" idea of energy output idea of more heat lost (to surroundings)at higher temperature "absorbing heat at same rate as radiating heat" (3) **ignore** (sun) light / rays	**(3)**

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Q3.

Question Number	Answer	Additional guidance	Mark
	an explanation linking: (the colours have) different wavelengths (1) different wavelengths / colours travel at different speeds (1) so refract by different amounts (1)	 allow the word frequencies for wavelengths for refract allow bend/change direction/follow different path	**(3)** AO 2 1

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Q4.

Question	Answer	Additional guidance	Mark
(i)	any one from the light enters the block at 90° (to the surface of the block) (1) the light enters the block at right angles (to the surface of the block) (1) the light enters the block perpendicular (to the surface of the block) (1) the light enters (the block) along/at the normal (1) the angle of incidence (when light enters block) is 0° (1)		**1 AO3.3**

Question	Answer	Additional guidance	Mark
(ii)	a description to include three from the following to increase the angle in the glass / angle of incidence (1) observe the refracted beam until the angle of refraction is 90° / the beam is along the edge / the beam just reflects into the glass block / the beams starts to total internally reflect (1) the angle in the glass / angle of incidence is the critical angle (1) repeat and take the average value(1)	accept move ray clockwise if no other mark scored award 1 mark	**3 AO3.3**
		for move the ray of light	

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