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| **Before** | **Objectives** | **After** |
|  | **63 Explain** how the behaviour of light can be described in terms of waves and photons. |  |
|  | **64 Recall** that the absorption of a photon can result in the emission of a photoelectron. |  |
|  | **65 Understand** and **use** the terms threshold frequency and work function and recognise and use the expression  *hf* = φ + ½ *mv2max* |  |
|  | **66 Use** the non-SI unit, the electronvolt (eV) to express small energies. |  |
|  | **67 Recognise** and **use** the expression *E* = *hf* to calculate the highest frequency of radiation that could be emitted in a transition across a known energy band gap or between known energy levels. |  |
|  | **68 Explain** atomic line spectra in terms of transitions between discrete energy levels. |  |
|  | **69 Define** and **use** radiation flux as power per unit area. |  |
|  | **70 Recognise** and **use** the expression efficiency = [useful energy (or power) output]/[total energy (or power) input]. |  |
|  | **71 Explain** how wave and photon models have contributed to the understanding of the nature of light. |  |
|  | **72 Explore** how science is used by society to make decisions, for example, the viability of solar cells as a replacement for other energy sources, the uses of remote sensing. |  |