BCS Higher Education Qualification

Professional Graduate Diploma

October 2024

EXAMINERS' REPORT

IT and the Environment

Questions Report:

A1	
	This question asked about the Smart Grid and Smart Meters, as well as IoT devices and their environmental impacts. There were generally good answers to both parts, showing an understanding of the core issues. Some answers would be improved by being less general and focusing on the issues asked in the question. For example, covering the benefits and challenges. Too few responses provided examples of IoT for smart buildings, waste management and energy efficiency or environmental monitoring.
A2	
	This question was about remote sensing, covering resolution and using remote sensing to monitor sea surface temperatures. Overall, candidates scored high marks on this question, but answers lacked sufficient detail to score all the marks. Answers could have been awarded more marks by including details of the various "resolution" examples.
B3	
	This question asked about the environmental impacts that arise from the manufacture and use of ICT, as well as managing redundant IT. Candidates scored well on this question, but answers lacked sufficient detail to score all the marks. Examples were cited but were too brief and did not adequately explore the impacts. Regarding management of redundant IT, many could refer to the use of reduce, reuse and recycle, but few thought about the issue of auditing all IT to create an understanding of what resources were used and needed to be managed. This would help the organisation to restrict use to authorised equipment, so that it has a more accurate understanding of its environmental impact
B4	
	This question asked about legislation with respect to data centres and their environmental data, as well as reporting on issues of energy consumption, water and waste heat. Answers to this question were generally insufficient. Very few candidates were able to identify relevant legislation. Some answered about general legislation that is relevant for environmental work, but the question asked about legislation relevant for data centres. Very few examples of why data centre environmental data needed to be reported were given. Candidates did not adequately explore the energy, water, waste, and heat reuse topics in sufficient detail for high marks.

B5	
	This question asked about calculations of energy use and Green House Gas (GHC) emissions. It also asked about emission scopes. There were some good marks on this question, but many were brief or general and did not always address the question. Better answers were able to comment on a suitable strategy to measure the energy consumption of different equipment and use tools to help with some of the calculations.
	Few answers commented on GHC scopes (Scope 1, Scope 2, Scope 3), and only some mentioned how standards like ISO 14064 could help to define the process to estimate the GHC emissions.