

BCS Higher Education Qualification

Diploma

October 2021

EXAMINERS' REPORT

SMART SYSTEMS

General comments

<p>Some very good answers, with lots of description and a deep understanding of the concepts, mixed with weaker answers with descriptive phrases such as “....is good for the world.” The best answers across all the questions were those that understood the core concept, applied it in a practical context and considered wider, sociological issues.</p>

<p>There were a few candidates who did not complete all (or enough) of the required questions. These candidates were obviously at a disadvantage, as they missed out on opportunities to gain extra marks.</p>
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Question number: A1

Syllabus area: Core Concepts

Total marks allocated:

Examiners' Guidance Notes

<p>In general, this question was answered well. There were a few who confused the term 'service' to just mean the hospitality and service industry, but overall, it was answered well. The better answers had detailed descriptions of Smart Industry, its use, and broader sociological impacts on its users.</p>
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Question number: A2

Syllabus area: Core Concepts / Impacts & Challenges / Applications

Total marks allocated:

Examiners' Guidance Notes

<p>Part A was answered well, most students could identify and describe practical applications of AI. Part B was weaker. There was lots of confusion as to what Data Mining was, and what it was capable of.</p>

Question number: A3
Syllabus area: Enabling Technologies / Applications
Total marks allocated:
Examiners' Guidance Notes
<p>This question was a strongly answered question. Surprisingly, Part A (definition) was slightly weaker, but Part B (ML use) was answered well. There were lots of practical applications, and use cases for ML.</p>

Question number: B4
Syllabus area: Cyber Physical systems security / Impacts & Challenges
Total marks allocated:
Examiners' Guidance Notes
<p>There were only a couple of candidates who were able to define and discuss elements of security and risk management. Most answers were very vague or missed the point of the question. This was about Risk management and its processes. Some candidates almost tried to Risk Assess the CPS and come up with a list of vulnerabilities. The explanation behind this thought process is what was needed.</p>

Question number: B5
Syllabus area: Enabling Technology
Total marks allocated:
Examiners' Guidance Notes
<p>The Blockchain definition was wide in its interpretation. Some very good answers included a background, detailed description of how it works, its pros and cons and its impact to society and uses. Weaker answers included descriptions of how it was a "means of sending data across a network".</p>

Question number: B6
Syllabus area: Core Concepts / Applications
Total marks allocated:
Examiners' Guidance Notes
<p>This question was answered well. There were some very good definitions of IoT. The best answers understood and explained the intersection between the physical and virtual worlds and, the crucial role humans play. Some detailed explanations of Smart Systems focused on industries and the societal impact, whereas weaker answers focused on Smart Phones / individual devices and the impact on an individual scale.</p>