BCS THE CHARTERED INSTITUTE FOR IT

BCS HIGHER EDUCATION QUALIFICATIONS
BCS Level 5 Diploma in IT

SMART SYSTEMS

Thursday 5th October 2023 - Afternoon

Answer any FOUR questions out of SIX. All questions carry equal marks.

Time: TWO hours

Answer any Section A questions you attempt in Answer Book A
Answer any Section B questions you attempt in Answer Book B

The marks given in brackets are indicative of the weight given to each part of the question.

Calculators are NOT allowed in this examination.
Section A
Answer Section A questions in Answer Book A

A1.

a) Define Smart Systems and discuss THREE of its characteristics. (12 marks)

b) Identify and discuss the categories of AI used in the development of Intelligent and Smart Systems. (13 marks)

A2.

a) Define what is meant by risk assessment. Include examples to illustrate your answer. (9 marks)

b) List THREE risk assessment processes. Include examples to demonstrate your answer. (16 marks)

A3.

a) Define Big Data and Data Analytics. Give a detailed discussion of their benefits. (9 marks)

b) Identify the FOUR types of Data Analytics. (16 marks)

Section B
Answer Section B questions in Answer Book B

B4.

a) Describe the THREE Cyber Physical Systems layers. (15 marks)

b) Describe the use of the different practices and technologies when maintaining the security of Operational Technology (OT) and the security of Information Technology (IT). (10 marks)

B5.

a) Define and Discuss Internet of Things (IoT) technology and Smart Home with examples. (15 marks)

b) Give FIVE advantages and FIVE disadvantages of Smart Home. (10 marks)

B6.

a) Define Cloud Computing technology and discuss the characteristics and uses of the three service types. (15 marks)

b) Describe the advantages and disadvantages of Cloud Computing technology. (10 marks)

END OF EXAMINATION