Diploma Programme
Programme du diplôme
Programa del Diploma

Information technology in a global society
Higher level
Paper 3

19 May 2023

Zone A afternoon | **Zone B** morning | **Zone C** morning

1 hour 15 minutes

Candidate session number

Instructions to candidates

- Write your session number in the boxes above.
- Do not open this examination paper until instructed to do so.
- Read the case study carefully.
- Answer all questions.
- Answers must be written within the answer boxes provided.
- The maximum mark for this examination paper is **[30 marks]**.

08EP01

International Baccalaureate
Baccalauréat International
Bachillerato Internacional

Answer **all** questions. Answers must be written within the answer boxes provided.

Refer to the *The return of the physical retail store* case study **and** to your own related research in responding to the following questions.

1. (a) Identify **two** components in an RFID tag. [2]

```
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
```

(b) Identify **two** characteristics of a smart shelf. [2]

```
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
```

08EP02

2. The augmented reality (AR) solutions proposed by André include augmented reality mirrors and an in-store app (lines 37–42).

Explain **three** factors that André should consider when installing these augmented reality (AR) technologies. [6]

3. The customer service robots have been developed to recognize the human voice using natural language processing (lines 43–44).

To what extent will customer service robots using natural language processing improve the customer experience in *MCA Sports'* flagship store? [8]

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

....

08EP05

Your response to question 4 **must** include evidence of independent research linked to the *The return of the physical retail store* case study.

4. The Geneva store will become *MCA Sports'* flagship store and will incorporate four new technologies (lines 31–36):
- Augmented reality (AR) solutions
- An in-store companion app
- Customer service robots
- Smart shelves.

Discuss whether the introduction of these new technologies will be beneficial to *MCA Sports*. [12]

. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .
. . . .