

**Information technology in a global society**  
**Higher level**  
**Paper 3**

Friday 4 May 2018 (morning)

Candidate session number

1 hour 15 minutes

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**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]**.



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

Refer to the *A Doll Called Alicia* case study **and** to your own related research in responding to the following questions.

- 1. (a) Alicia will have sensors that use voice recognition.

Identify **two** additional sensors that may be added to provide for a more sophisticated product.

[2]

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- (b) When Alicia is initially activated after purchase, it will ask a number of questions to configure the most appropriate profile for the child.

Identify **two** questions that could be asked.

[2]

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2. (a) Alicia records data about the child's behaviour.

Explain **one** way that this data could be made compatible for use with other systems. [2]

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(b) Explain the sequence of steps that take place when Alicia responds to what the child is saying. [4]

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Your response to question 4 **must** include evidence of independent research linked to the *A Doll Called Alicia* case study.

4. There have already been concerns raised by parents about the deep-learning AI version of the doll. As a result Margaret is considering whether to develop a version of Alicia that is based on the original generic profile and does not share any data with the cloud-based services.

Discuss whether MAGS should continue to develop the cloud-based deep learning AI version of Alicia or introduce a simpler version that only uses the original generic profile.

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