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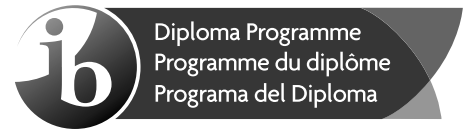
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Information technology in a global society
Higher level
Paper 3

Monday 13 May 2019 (morning)

Candidate session number

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1 hour 15 minutes

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 *On the road to driverless cars* case study **and** to your own related research in responding to the following questions.

1. (a) Information is communicated between a driverless vehicle and the road infrastructure.

(i) Identify **one** piece of information communicated from the driverless vehicle to the road infrastructure. [1]

.....
.....

(ii) Identify **one** piece of information communicated from the road infrastructure to the driverless vehicle. [1]

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.....

(b) Outline **one** economic advantage of the introduction of autonomous vehicles. [2]

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2. Explain the function of both GPS **and** LIDAR in a fully autonomous vehicle at level 5 of the SAE scale.

[6]

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08EP03

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3. Discuss whether it will be possible to develop an ethical framework that could be used for driverless cars in a number of different countries, such as China, India, USA and Germany.

[8]

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08EP07

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08EP08