Remember to write your candidate number on every sheet of answer paper used.

You must both questions. Each of the questions is worth the same number of marks.

You need not answer the questions in the order set, but you must start each one on a separate piece of paper.

Spend about 45 minutes on each question.

Do not turn over until told to do so.
Question 1: START A NEW SHEET OF PAPER NOW

For years now, companies around the world have been developing self-driving cars. Self-driving cars (SDCs) are vehicles which are capable of sensing their environment and navigating without human input. Some research suggests that SDCs could reduce crashes by up to 90% from conventional human-operated vehicles, and many individuals and governments have expressed great interest in these cars as a result. Software developers working on SDCs consider in advance what the car should be programmed to do in cases where injury or loss of life is unavoidable. For example: given the unexpected action of another motorist, engineers need to consider whether the SDC should be programmed to take action (such as crashing into a wall) which risks the health and even lives of its own passengers if the only alternative is to cause greater harm to other motorists or pedestrians. 

A number of surveys in the last two years have suggested that the majority of people support the development of SDCs, and are optimistic as to the benefits of SDCs for road safety. Most people at the same time have serious concerns about being passengers in a SDC.

a) Suggest at least one reason why someone might support the development and sale of SDCs yet not take up the opportunity to travel in one.  

b) To what extent is it reasonable for a customer to request that a SDC be programmed to protect the life of its passengers at all costs? 

c) Read the account below and then answer the question that follows.

Imagine that a five-year-old girl on her way to school in the United States of America is hit by a SDC and requires medical treatment which costs $50,000. The parents are not insured and are faced with the prospect of selling their home in order to pay for the medical care. The following facts have been established:

- The SDC swerved onto the pavement to avoid colliding into the back of a large lorry which stopped suddenly.
- The SDC was examined by engineers and judged to be operating normally.
- The passenger in the SDC sustained serious neck injuries but was able to pay his own medical costs as he was insured.

Who, in your view, should bear the most responsibility for paying the little girl’s medical expenses? In your answer you should consider the contribution of the following individuals and explain your reasoning:

- The Chief Executive of the company who manufactured the SDC
- The software engineer who programmed the SDC
- The passenger who bought the SDC
- The driver of the lorry
- The girl’s parents

[Total mark for question 1: 25]
Question 2: START A NEW SHEET OF PAPER NOW

Write a response of no more than 700 words, in whatever style seems appropriate, to ONE of the following.

EITHER

“The impact of social media upon individuals and society has been profoundly negative.” Discuss.

OR

“Schools should focus more on the STEM (Science, Technology, Engineering and Mathematics) subjects than the Arts and Humanities.” Discuss.

OR

The Future

[Total mark for question 2: 25]

END OF PAPER