

2024 年度 国際キャリア学科

## 論 文

〔自己推薦 A O (B)〕 15・26-03

### 注 意

1. 監督者の合図があるまで問題冊子は開かないでください。
2. 解答はすべて解答用紙のきめられた箇所に記入してください。

## **Part 1. Summary of the Reading Passage**

Students may respond in English (Option A) or in Japanese (Option B).

### **Option A.**

Summarize the main points of the article in English. Your summary should be between 100 and 200 words in length

### **Option B.**

Summarize the main points of the article in Japanese. Your summary should be between 100 and 200 characters (字) in length

## **Reading Passage**

In recent years more and more people have been buying battery-powered electric vehicles (BEVs). Since 2020 the market for BEVs has expanded greatly. Meanwhile, many countries have announced plans to ban the sale of internal-combustion engine (ICE)\* cars that run on gasoline or diesel. Norway is the first country to ban the sale of new ICE cars, beginning from 2025. Other countries in Europe and elsewhere, including China and India have announced plans to end the sale of ICE passenger cars during the 2030s.

Why are many countries planning to ban the sale of new ICE cars over the next 15 to 20 years? Under the 2015 Paris Agreement 193 countries agreed to become carbon neutral\* by eliminating net Green House Gas (GHG)\* emissions, such as CO<sub>2</sub>, by the second half of this century, mostly by 2050 to 2060, to keep global warming within 1.5 degrees Celsius, or a maximum of 2.0 degrees Celsius. Replacing ICE cars and trucks with zero emission vehicles is an important way many countries are striving to realize the goals of the Paris Agreement.

Japan played a leading role in the development of electric vehicles. Nissan was the first company to mass-market a BEV, the Nissan Leaf, starting in 2011. In 2014 Toyota followed suit by becoming the first company to mass produce a Fuel Cell Electric Vehicle (FCEV)\* that uses hydrogen\* instead of charging a battery. Nonetheless,

Japanese automobile makers have fallen behind in the race build and sell electric vehicles, as most of the cars they produce are still gasoline-powered ICE cars, including hybrids that use an ICE engine plus an electric motor powered by a battery. Companies outside of Japan, such as Tesla, Hyundai, Volkswagen, and several Chinese companies such as BYD, have taken the lead in BEVs.

At the same time electric vehicles have attracted criticism.\*\* Some argue that the batteries that BEVs use are not environmentally friendly as they require mining a lot of minerals, such as cobalt and lithium, require a lot of energy to produce, and eventually must be discarded when they wear out. Some even claim that their net emissions are not much lower than those of ICE vehicles. At the same time FCEV sales remain very small as hydrogen remains expensive, there are few hydrogen fueling stations, and most hydrogen is still produced from coal or natural gas, thereby creating CO<sub>2</sub> emissions. Some critics argue that hybrid cars are more practical and better for the environment in the short run, even though they still emit some CO<sub>2</sub>.

BEV supporters respond that the batteries BEVs use can and are being recycled, and that if zero-emission renewable energy such as solar and wind power are used in the manufacturing and charging of BEVs, then their net carbon emissions are nearly zero. Finally, they point out that better and more environmentally friendly batteries are being developed and that all new technologies require time and trial and error to improve. One thing is for sure, the debate over whether BEVs, FCEVs or hybrid cars are better for the environment is likely to continue for at least several more years.

\*Internal-combustion engine: 内燃機関

\*Carbon neutral: カーボンニュートラル (温室効果ガスの排出実 = ゼロ)

\*Green House Gas: 温室効果ガス

\*Fuel Cell Electric Vehicle: 燃料電池電気自動車

\*hydrogen: 水素

\*\*Rowan Atkinson, "I love electric vehicles — and was an early adopter. But increasingly I feel duped," *The Guardian*, June 3, 2023.

## **Part 2. Response in English to the Reading Passage**

What do you think about the problem discussed in the Reading Passage (Part 1)? Your response should be written in English and be between 300 and 500 words in length.

## **Part 3. Short Essay**

Select one essay question from the three choices and write your response. Provide clear examples to support your view. Your answer should be between 300 and 500 words in length.

- 3a. With global tensions and instability growing between major powers, as exemplified by Russia's invasion of Ukraine and tensions between China and the US over Taiwan, is this the wrong time to be promoting nuclear disarmament, because nuclear deterrence is said to have a role in preventing great power war? Or is this precisely the right time to be promoting nuclear disarmament? Discuss and give reasons for your opinion.
- 3b. Now that the Covid pandemic appears to be effectively over, reflect on how it has or has not changed your life. Have you gone back to the way you were living before Covid, or has the pandemic changed your life and the way you live it forever, for better or worse? Provide concrete examples.
- 3c. If you could have one superpower, what would it be? Explain why this superpower would be more appealing than any other and what you would do with it.