National University
Science & Technology
International Maritime College Oman

الـجــامـعــة الوطنيـة

كليــة عمــان البحــريــة الـدوليــة

ACADEMIC YEAR 2023 – 2024

Program	Year	Semester	Paper
LTM	**2**	**1**	**MAIN1**

MODULE NAME:	**TRANSPORT ENGLISH**		
MODULE CODE:	**PENG-II-I**	EXAM DATE:	**02/01/2024**
TEACHER'S NAME:	**AMEER, MARTIN & ZOUHAIER**	DURATION:	**2 hrs.**

Questions to be answered on:	Allowed requirements	Number of pages
Space provided on the question paper	Pen	09

Points of Attention:

- For each question, the maximum earned points are mentioned between brackets at the end of each question.
- Write very clearly! Answers that are not readable are not marked and don't get points!
- Make sure your answers are written to the point.
- All answers should be written **in English**.
- Write all the answers **in blue or black pen only**.
- When finished, submit the question paper together with the answer scripts and the signed cover page to the invigilator.
- Any cheating/copying may result in an instant failing of the examination.

FINAL MARKS

STUDENT NAME:			**50**
STUDENT ID:			**10**

Number of answer scripts: …………….………

Student's signature: ………………………………

Invigilator: …………….……...........

Time of receipt: …………….........

Read the text carefully and answer the following questions.

The Impact of Automated Electric Vehicles on Transportation

Paragraph 1: Introduction to Automated Electric Vehicles

The transportation industry is experiencing a significant transformation with the emergence of automated electric vehicles (AEVs). AEVs combine the benefits of automation and electrification to revolutionise how we move people and goods. These vehicles offer a sustainable and efficient solution to transportation challenges and are poised to reshape the automotive and logistics sectors.

Paragraph 2: Benefits of Automated Electric Vehicles

AEVs offer many advantages, including reduced environmental impact, improved safety, and enhanced efficiency. Their electric propulsion systems result in lower emissions and decreased dependence on fossil fuels. Additionally, AEVs are equipped with advanced sensor systems and automation technology that reduce the likelihood of accidents and human errors, making transportation safer. Combining automation and electrification also increases energy efficiency and lowers operational costs.

Paragraph 3: Integration of AI and Sensors in AEVs

One of the key elements enabling AEVs is the integration of artificial intelligence (AI) and sensor technology. AI algorithms allow these vehicles to perceive and adapt to their surroundings, making them capable of autonomous operation. Sensors, such as lidar and cameras, provide the necessary data for the AI to make real-time decisions. This synergy between AI and sensors is at the core of AEVs' automation.

Paragraph 4: Infrastructure Challenges and Charging Network

While AEVs hold promise, there are challenges to their widespread adoption. The existing infrastructure must be adapted to support electric vehicles, including developing a robust charging network. Ensuring that charging stations are conveniently located and equipped with fast-charging capabilities is essential for the success of AEVs.

Paragraph 5: Regulatory and Ethical Considerations

As AEVs become more prevalent, regulatory frameworks must be established to address issues such as liability, safety standards, and data privacy. Additionally, ethical considerations surrounding automated vehicles, such as how they make decisions in critical situations, need to be thoroughly explored. These aspects are crucial for building public trust and ensuring a smooth transition to a future dominated by AEVs (OpenAI, 2023).

1. **Tick [✓] the correct answer: Where does integrating AI and sensor technology significantly impact AEVs?** **[2 Marks]**
    [a] In reducing operational costs
    [b] In increasing environmental impact
    [c] In enhancing safety and autonomy
    [d] In expanding charging infrastructure

2. **Tick [✓] the correct answer: According to the text, what is one of the infrastructure challenges related to AEVs?** **[2 Marks]**
    [a] Developing robust charging networks
    [b] Adapting to autonomous operation
    [c] Integrating AI algorithms
    [d] Reducing emissions

3. **Complete the sentence with one word from the provided text. The word should match the context of the new sentences in form and meaning.** **[5 Marks]**
    [a] AEVs offer a sustainable and efficient solution to transportation challenges and are poised to reshape the automotive and logistics _____.
    [b] The combination of automation and electrification leads to increased energy efficiency and reduced operational _____.
    [c] AI algorithms allow these vehicles to perceive and adapt to their surroundings, making them capable of autonomous _____.
    [d] Ensuring that charging stations are conveniently located and equipped with fast-charging capabilities is essential for the success of _____.
    [e] As AEVs become more prevalent, regulatory frameworks must be established to address issues such as liability, safety standards, and data _____.

4. **Match the content of each paragraph to its description [a], [b]…** **[5 Marks]**

Paragraphs	Descriptions	Answer
[1] Introduction to Automated Electric Vehicles	[a] Discusses the benefits of AEVs, including environmental impact and safety.	[1] _____
[2] Benefits of Automated Electric Vehicles	[b] Addresses the regulatory and ethical considerations surrounding AEVs.	[2] _____
[3] Integration of AI and Sensors in AEVs	[c] Provides an overview of AEVs and their potential to transform transportation.	[3] _____
[4] Infrastructure Challenges and Charging Network	[d] Explores the integration of AI and sensor technology in AEVs.	[4] _____
[5] Regulatory and Ethical Considerations	[e] Discusses the challenges and requirements for AEV infrastructure.	[5] _____

5. **In 150 words max, discuss the potential impact of automated electric vehicles on employment in the transportation sector. Consider both the potential for job displacement and the creation of new job opportunities.** **[6 Marks]**

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VOCABULARY [10 Marks]

Question 1: Identify and correct the five paragraph mistakes, considering different error complexity levels. **[5 Marks]**

The Electric scooters have swiftly become a popular mode of urban transportation. Many cities have embraced these eco friendly vehicles as they offer a convenient and environmentally friendly way to navigate urban landscapes. People can locate and rent electric scooters using smartphone apps, making the process quick and efficient. These scooters are favoured for their ability to reduce traffic congestion, lower emissions, and provide an alternative to traditional cars for short trips. However, despite their advantages, electric scooters have raised concerns about safety, sidewalk clutter, and regulatory comply. Cities wideworld are working on implementing regulation and save measures to address these issues (OpenAI, 2023).

Mistakes	Corrections
1.	
2.	
3.	
4.	
5.	

Question 2: Put the words in their proper places. There are 2 extra words. **[5 Marks]**

leverages   energy-efficient   promising   cutting-edge   garnered   cut-edge   promise

Ultrasonic transportation is a [1] _____ concept that has [2] _____ significant attention in China's transportation landscape. This innovative mode of transportation [3] _____ ultrasonic technology, offering the potential for high-speed travel with minimal environmental impact. Ultrasonic vehicles can reach speeds well beyond those of traditional transportation methods, making them a [4] _____ solution to address the challenges of urban congestion and long-distance travel. China, known for its ambition to adopt futuristic transportation solutions, has been actively exploring the feasibility of ultrasonic transportation. By utilizing ultrasonic waves to levitate and propel vehicles through low-pressure tubes, this technology has the potential to revolutionize the way people and goods are transported within the country. Such transportation systems are not only fast but also [5] _____, contributing to China's goals of reducing carbon emissions and environmental pollution (OpenAI, 2023).

Artificial Intelligence (AI) is rapidly transforming the transportation and logistics landscape, offering unprecedented opportunities, and posing unique challenges. In 200 words, Reflect on the challenges and innovations within the realm of AI in transportation and logistics.

Rubric

Criteria	Inadequate (0)	Limited (1)	Satisfactory (2)	Proficient (3)	Exceptional (4)
Content	The response lacks a clear introduction or does not address the topic effectively. It contains numerous inaccuracies and fails to discuss challenges and innovations.	The response offers a basic introduction but lacks depth. It addresses some challenges and innovations but with limited detail and examples.	The response provides a clear introduction and adequately discusses challenges and innovations in sustainable transportation. It may lack depth or detail in some areas.	The response delivers a well-structured essay with a clear introduction. It thoroughly discusses challenges and innovations, supported by relevant examples and case studies.	The response presents an outstanding essay with a compelling introduction. It comprehensively discusses challenges and innovations, incorporating in-depth analysis and relevant examples.
Organization	The response is poorly structured, making it difficult to follow. It lacks clear paragraphs or sections.	The response is somewhat organized but may have issues with coherence and transitions between ideas.	The response is well-organized, with a clear structure and logical flow between ideas.	The response is highly organized, with a clear and compelling structure that guides the reader through the essay.	The response is exceptionally well-organized, with a structure that enhances the clarity and impact of the essay.
Language and Style	The writing is riddled with errors and is incomprehensible. It lacks appropriate vocabulary and style.	The writing contains significant language and style issues, which hinder clarity and understanding.	The writing may have some language and style issues, but they do not severely impact clarity or understanding.	The writing demonstrates adequate language and style, but minor errors are present.	The writing showcases exceptional language and style, is free from errors and is exceptionally well-written.
Evidence and Support	The response lacks supporting evidence and fails to cite relevant examples or case studies.	The response offers limited supporting evidence and may not provide sufficient examples to validate claims.	The response includes some relevant evidence but could benefit from more extensive use of examples and case studies.	The response uses suitable evidence to support claims, including examples and case studies, though a few areas may require further support.	The response is rich in relevant evidence, providing a solid foundation for claims with many examples and well-integrated case studies.
Critical Thinking	The response lacks critical thinking and original analysis. It provides no insights or perspectives.	The response displays limited critical thinking and offers only fundamental analysis. It lacks original insights.	The response demonstrates some critical thinking, but the analysis is somewhat superficial and lacks depth.	The response showcases good critical thinking, providing meaningful analysis and offering a few original insights.	The response excels in critical thinking, offering profound analysis and numerous original insights.

MLO & Bloom's Level of Complexity

Q #	MLO Addressed	Complexity Level	Mark	Remark
Reading Q1 Q2 Q3 Q4 Q5	MLO1 MLO2 MLO3	• Understand • Apply • Write	20	
Vocab Q1 Q2	MLO1 MLO2	• Understand • Apply	10	
Writing Q1	MLO3 MLO4 MLO6	• Write • Analyse • Evaluate	20	

Reference: OpenAI. (2023). ChatGPT (September 25 Version) [Large language model].

https://chat.openai.com