Épreuve du 1er groupe

A N G L A I S

CrabWalk Electric Vehicles

The 2026 GMC HUMMER SUV introduces technology that sounds like science fiction: the ability to drive diagonally like a crab, in all directions, across a beach. "CrabWalk" represents revolutionary 4-wheel steering capabilities that transform how this electric SUV navigates challenging terrain and tight spaces. At GMC's car making plant in Branford, customers' first experience with these systems typically produces amazed reactions: watching a full-size SUV move diagonally defies everything we've learned about how vehicles behave. Here's how this remarkable technology works and why it matters.

Traditional vehicles steer only their front wheels, forcing the rear of the vehicle to make large circles and curves during turns. This creates the familiar challenge of parallel parking, navigating narrow routes, or positioning equipment trailers: you're constantly managing the rear overhang and adjusting for the vehicle's pivot point. In contrast, four-wheel steering changes these dynamics completely by allowing rear wheels to turn independently, which fundamentally modifies the vehicle's behavior.

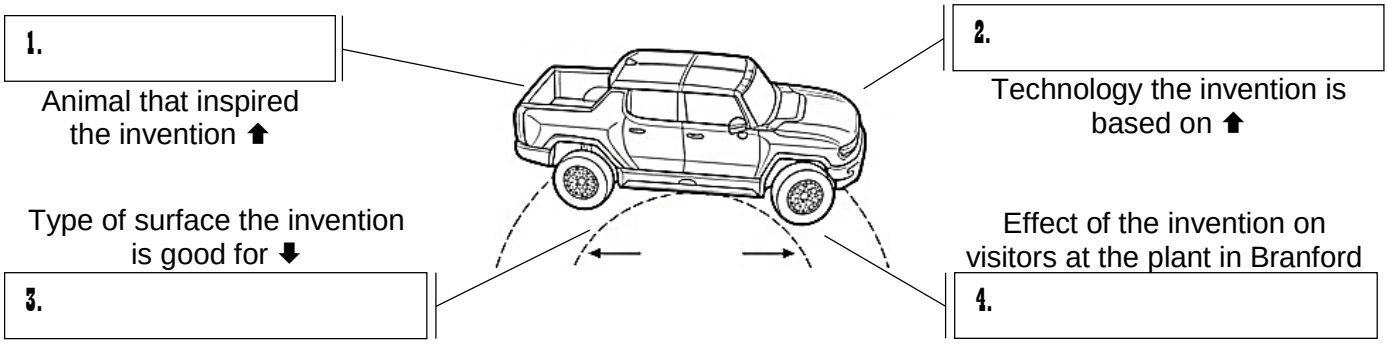
The electric HUMMER SUV's advanced 4-wheel steer system can turn rear wheels up to 10 degrees in either direction. At low speeds (below approximately 48km/h), rear wheels turn opposite the fronts for tighter turning circles and boosted maneuverability. At highway speeds, rear wheels turn in the same direction as the fronts for improved stability and easier lane changes. The system operates transparently, constantly adjusting based on speed, steering input, and driving conditions without requiring driver intervention.

Imagine approaching a narrow road with large rocks on one side and a precipice on the other. Traditional vehicles must align perfectly with the road centerline before entering. This requires multiple backup-and-adjust maneuvers. With CrabWalk engaged, you simply angle toward the road and drive diagonally into position, maintaining visibility of both obstacles while precisely controlling your line. Urban applications are equally impressive. Parallel parking becomes dramatically easier: approach the space at an angle, activate CrabWalk, and slide diagonally into the spot with minimal back-and-forth adjustments. Navigating narrow parking garages or positioning the vehicle precisely for loading equipment transforms from frustrating exercises into simple, controlled movements.

Adapted from www.sciencedaily.com/releases/2024/12/241206111951.htm

I. COMPREHENSION *(10 marks)*

A) Read Paragraph 1 and fill in the chart below with information about the 2026 Hummer SUV. *3 marks*



.../…2

B) Read Paragraph 2 and write down the passages where the following information is given. *2 marks*

5. Consequence of the fact that traditional vehicles DO NOT steer their rear wheels:

☞ _____

6. Three situations in which maneuvering a traditional vehicle is particularly complicated:

☞ _____

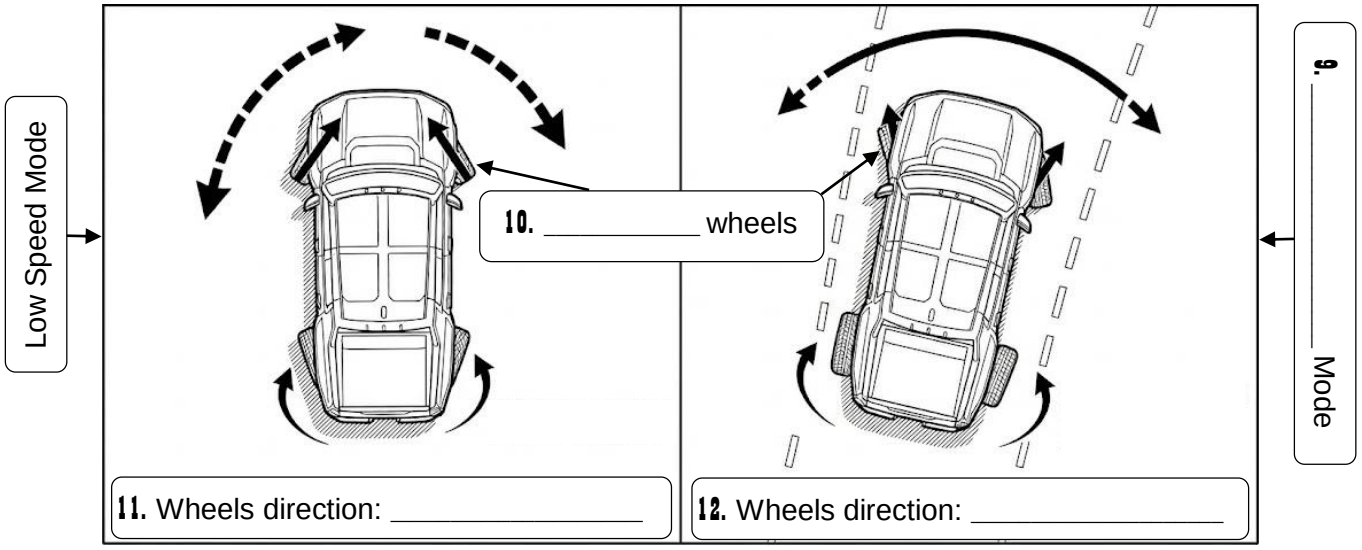
7. The section of the vehicle that you need to watch all the time while adjusting for the pivot point:

☞ _____

8. How "Crabwalk" vehicles change the maneuvering dynamics of traditional vehicles:

☞ _____

C) Complete the labels (9-12) in the following illustration with information from Paragraph 3. *3 marks*



D) Read Paragraph 4 and write a tick (✓) or a cross (✗) to indicate the right vehicles properties. *2 marks*

Vehicle's Driving Requirements	Traditional	Crabwalk
13. Drive in parallel with road centerline		
14. Keep large rocks and precipice visible		
15. Realize limited back-up maneuvers		
16. Engage in frustrating exercises		

II. LINGUISTIC and COMMUNICATIVE COMPETENCE *(06 marks)*

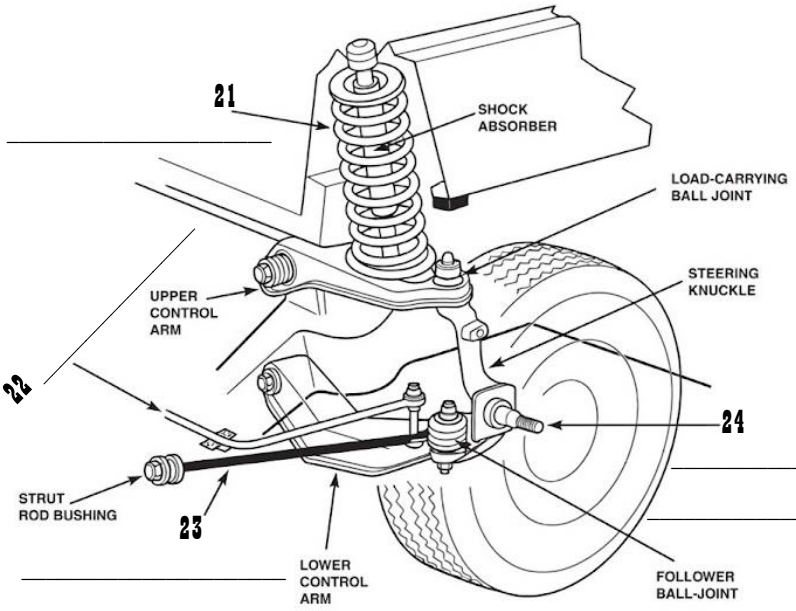
E) Complete the explanation below with appropriate expressions from the box. *2 marks*

electric motor ❁ same direction ❁ traditional steering ❁ parallel parking ❁ electric motor

"Crab walk" or "Crab mode" is a specialized vehicle movement enabled by advanced 4-wheel steering systems. Unlike (**17**) _____ where the front and rear wheels turn in opposite directions, crab walking forces all four wheels in the (**18**) _____, at the same angle. This allows the vehicle to travel diagonally. Each individual wheel houses its own (**19**) _____, break, suspension, and steering controller. In some designs, wheels can pivot up to 90 (**20**) _____ allowing completely lateral, side-to-side movement.

.../...3

F) Read the description and complete the labels (21-24) in the picture with the word in bold. *2 marks*



This image illustrates certain parts of a car suspension. The ***coil spring*** is positioned vertically at the top of the system. It is curled like a spiral around the shock absorber where it constantly compresses and expands to absorb road shocks. The ***spindle*** is located at the outer edge of the suspension setup where it acts as the mounting point for the wheel. Positioned next to the strut rod, the ***stabilizer bar*** links the left and right suspension assemblies together across the chassis, to maintain control. Finally, the ***strut rod***, which supports the strut rod bushing, is located at the lower left side of the image. It is connected to the lower control arm; it serves to stabilize forward and backward movements.

G) A car owner is having a conversation with a mechanic over engine issue. Put the words in parentheses in the right forms to make the conversation meaningful. *2 marks*

Car Owner: Good morning! I've been having some trouble with my car these days. It makes a strange noise whenever I start the engine. Could you please take a look?

Mechanic: Of course, I'd be happy to help. Could you (**25**) _____ *(description)* the noise a bit more?

Car Owner: It's a very noisy and unpleasant sound and sometimes, the engine feels like it's choking.

Mechanic: That could be an issue with the engine's internal components or possibly the fuel system. When was the last time you (**26**) _____ *(having)* a full service done?

Car Owner: It's been about eight months since the last service. I usually get it checked once a year.

Mechanic: Alright! I'll need to run a diagnostic test that will take around an hour. Once we identify the problem, I can give you a more (**27**) _____ *(accuracy)* estimate for the repair price.

Car Owner: That sounds reasonable. You can go ahead with the diagnostic test.

Mechanic: You can leave it here and go home. If anything urgent is (**28**) _____ *(needs)*, I will contact you immediately. Is that okay?

Car Owner: Sure! I'll be waiting for you call. Thank you!

Mechanic: See you later.

Adapted from https://www.askfilo.com

III. WRITING *(04 marks)*

Choose ONE topic and write between 100 and 150 words about it.

Topic 1: The car industry has been making remarkable technological accomplishments recently. From electric cars to crab walk vehicles, through connected cars that navigate without a driver, advances in automobile manufacturing seem unstoppable. Do you expect cars to be able to fly like planes and drones sometime in the future? Why or why not?

Topic 2: Choose one of the car models below and give its technical description. For example, you can talk about its interior and exterior design, engine and powertrain, dimensions and weight, drivetrain and maneuvering properties, safety features, comfort specifications, etc.