

22T07AN01A31 Durée : 02 heures SÉRIES : T1-T2-STIDD – Coef. 02

<u>Épreuve du 1^{er} groupe</u>

<u>ANGLAIS</u>

Cars Produced in Africa by Africans for Africa.

Africa has been a consumer and never a producer over the years, when it comes to cars. The level of consumption is almost alarming and no one ever thinks of production. Last year, Africa was estimated to have bought about 2 million new cars. Africans have lost confidence in their local engineers so much that they don't expect them to be able to manufacture any meaningful technological outfit. As change is inevitable, some African entrepreneurs have refused to be left out in the very lucrative automobile industry. Here is the news that African-made cars are now on sale in our local car markets.

At the moment, some Africans are already owners of the Kantanka, a proudly made-in-Ghana car. This vehicle is on sale in a variety of colours and models including the Kantanka SUV, the Kantanka Pickup, etc. In case you want to see for yourself, the Kantanka Automobile Company (KAC) manufacturing plant is located in Gomoa Mpota, in the central region of Ghana.

Chief Dr. Innocent Ifediaso Chukwuma is the founder and developer of the Innoson Vehicle Manufacturing Company (IVMC), the first corporation to manufacture cars in Nigeria. They have been producing luxury cars, mini buses and trucks, which are already on sale and in use. Unlike the Kantanka, which is produced in limited numbers, Innoson has no less than 500 Nigeria-made cars released for sale at a reasonable cost varying between 1.5 million and 3.5 million naira. They have 3-year gear, engine, and axle warranty.

Then, comes an electric hybrid car produced in Uganda by Kiira Motors Corporation (KMC). It is an invention initiated by university students. Now, they have gained support from the Ugandan government. The Kiira EV Smack is made in a way that is very cost-effective in that it can be powered to use either electricity or diesel.

It's also good to include in our list the wind and solar power car, which was produced by a final-year Nigerian student of engineering, Segun Oyeyiola. He constructed the car in such a way that in the day, it uses solar energy, and wind turbine at night. In fact, Segun just retrofitted an old Volkswagen Beetle and turned it into a solar and wind-powered car. He installed a photovoltaic panel on the car's roof and a fan in the engine compartment to recharge the battery while driving, so that the car can also work with no sunlight. Oyeyiola said that its batteries take 5 to 6 hours to charge, but he is trying to improve both battery efficiency and charging speed. He also equipped the Beetle's on-board computer with several apps communicating through the GPS system and monitoring the conditions of the car's technological equipment.

Adapted from https://africa-facts.org/6-cars-produced-in-africa-by-africans-for-africa/

I. READING COMPREHENSION (09 marks)

- A) Read the paragraphs indicated and choose option a), b), or c) to answer questions 1-3. (01.5 marks)
 - 1. Some African entrepreneurs are now investing in the automobile industry... (paragraph 1)
 - a) thanks to the help of European and American car companies;
 - b) so that people can have confidence again in their local engineers;
 - c) because they could not continue to accept their exclusion from the business.

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| 2. | The | Kantanka | models | are made | . (paragraph 2) |
|----|-----|----------|--------|----------|-----------------|
|----|-----|----------|--------|----------|-----------------|

- a) somewhere in the center of Ghana;
- **b)** in a variety of manufacturing plants in Ghana;
- c) in places where Ghanaian visitors can see for themselves.
- 3. The Innoson Vehicle comes with a guarantee that... (paragraph 3)
 - a) is valid for 3 years and covers 3 parts of the car;
 - b) costs between 1.5 million and 3.5 million naira;
 - c) covers 500 kilometers of distance travelled.

| B) (| Quote from paragraphs 4-5 to decide whether the following statements are TRUE or FALSE. | (03 marks) |
|----------|---|------------|
| <i>~</i> | 4. Sometimes, cars can be invented by non-professional car makers. | |
| ΅ | 5. Segun Oyeyiola is an employee of the German car manufacturer Volkswagen. | |
| ☞ | 6. Segun's Beetle is equipped with a photovoltaic panel but it is not dependent on sola | r energy |

C) Complete this table with 'YES' or 'NO' to indicate the properties of the cars listed in the text. (03 marks)

| Descriptive Characteristics | Kantanka | Innoson | Kiira | Volkswagen Beetle |
|-------------------------------|-----------------|-----------------|-----------------|-------------------|
| Produced in Africa | YES | YES | YES | YES |
| Available in different models | 7. | 8. | NO | NO |
| Hybrid energy source | Not in the text | Not in the text | 10. | 12. |
| Limited in its production | YES | 9. | Not in the text | Not in the text |
| Low-priced (not expensive) | Not in the text | YES | 11. | Not in the text |

| D) Indicate the paragraph in which each of the ideas listed below is mentioned. | (01.5 marks) | |
|---|---------------|--|
| Example. "The beginning of a revolution in the car making industry" | 🗢 Paragraph 1 | |
| 13. "Probably the most green-energy-powered of all 4 cars" | ♂ Paragraph | |
| 14. "These inventors were sponsored by state authorities" | ♡ Paragraph | |
| 15. "Even the most expensive cars are produced in this firm" | ு Paragraph | |

II. <u>LINGUISTIC and COMMUNICATIVE COMPETENCE</u> (07 marks)

| E) Complete this paragraph with the correct forms of the words in brackets. (02 marks) |
|--|
| In Africa, local markets are growing, furnishing products and parts to automakers, from seats to |
| axles, bumpers to windshields. Labour costs can be as (16) (height) as 75% |
| cheaper in Africa than in European countries. Chinese automaker Dongfeng signed an agreement |
| n January with El Nasr Company to jointly produce (17)(electrons) vehicles in |
| Egypt. So this country is widely (18) (expectations) to become a major |
| automotive centre. In Rwanda, Volkswagen is testing e-mobility and many car production (19) |
| (facility) are planned in Ethiopia, Nigeria, and Ghana. Adapted from www.globalfeet.com |

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rods can pivot at this point on the (25)

____. The lower

| F) Choose the correct option in parentheses to complete the following | owing paragraph. (02 marks) | | | | |
|---|--|--|--|--|--|
| Segun's car runs on wind or solar power. He designed it is | n such a way that it runs on solar energy | | | | |
| in the day and uses wind turbine at night. So it does <i>not</i> use (20)(either § | | | | | |
| neither \$\sigma none)\$ electricity or diesel. In other wor | rds, Segun's Beetle is not an (21) | | | | |
| (electricity-powered \$ electric | ally power \ electrical-powered) car. It is | | | | |
| too bad that there are not many engineers like Segun in | Africa so that we don't need to import | | | | |
| cars from other continents anymore. (22)(I'm sorry \ I'regret \ I' wish) | | | | | |
| African leaders encouraged and supported investment in local car production. This way, most | | | | | |
| vehicles used in the continent (23)(| must \$\mathscr{G}\$ could \$\mathscr{G}\$ should) be adapted to the | | | | |
| specific needs of African consumers. | | | | | |
| G) Use words from the box to complete this description of how force from pistons moves cars. (03 marks) up and down \$\mathbe{S}\$ rotates \$\mathbe{S}\$ piston \$\mathbe{S}\$ engine \$\mathbe{S}\$ crankshaft \$\mathbe{S}\$ metal \$\mathbe{S}\$ mounted | | | | | |
| Crown Piston | This picture shows a connecting rod | | | | |
| Top ring Bottom ring | with its adjoining components. The | | | | |
| Gudgeon pin —————————————————————————————————— | piston is attached to a robust (24) | | | | |
| Connecting rod Little end big end | piece known | | | | |
| Crankshaft | as a connecting rod. The connecting | | | | |

end of the connecting rod is (26) _____ to the crankshaft, which serves as the

output shaft for the entire engine. This mounting point on the (27) ______ is offset

from the crankshaft's centreline. As the connecting rod moves (28) _____ with the piston, it (29) _____ the crankshaft. Adapted from www.carid.com/articles/how-does-internal-combustion-engine-work.html

<u>Topic 1</u>: It is a good thing that African entrepreneurs and engineers have now entered the car manufacturing industry. In your opinion, what are the obstacles to the development of made-in-Africa vehicles?

III. WRITING: Choose ONE topic and write 150-200 words about it. (04 marks)

Topic 2: Most African car dealers invest considerable money in the importation of second-hand cars, which can be very old sometimes. What other solution would you recommend for the automobile market in Africa to meet the needs and revenues of African consumers?