

071606T4AUT
AUTOMOTIVE TECHNICIAN LEVEL 6
ENG/OS/AUT/CR/3/6
SERVICE VEHICLE FUEL SYSTEM
NOV. /DEC. 2022



THE KENYA NATIONAL EXAMINATIONS COUNCIL

WRITTEN ASSESSMENT

Time: 3 hours

INSTRUCTIONS TO THE CANDIDATE.

*This paper has **TWO** sections **A** and **B**. Attempt questions in each section as per instructions given in the section.*

You are provided with a separate answer booklet.

Marks for each question are indicated in the brackets.

Do not write on the question paper

*This paper consists of **TWO (2)** printed pages*

Candidates should check the question paper to ascertain that all pages are printed as indicated and that no questions are missing

SECTION A: SHORT ANSWER QUESTIONS (40 MARKS)

In this section you are required to answer all questions.

1. In your view what is the difference between the **two** types of fuel supply? **(4Marks)**
2. What are the **two** types of petrol injection system? **(4Marks)**
3. State **four** (4) ways that can be used to manage wastes generated when servicing Service Vehicle Fuel System. **(4Marks)**
4. As an automotive technician, highlight **two** differences between two types of combustion chamber in CI engines? **(4Marks)**
5. You are a student in a technical institute taking automotive technician level 6. state **three** preheating devices. **(3Marks)**
6. State **two** possible faults that cause an engine to start and stop after few minutes. **(2marks)**
7. As a workshop mechanic in automotive garage, what **four** precautions would you consider as important in observing garage safety? **(4Marks)**
8. Differentiate between petrol and diesel fuel injection system. **(4Marks)**
9. State **one** type of direct and indirect petrol injection system? **(2Marks)**
10. Inline injection fuel pump has different operation as compared to DAP pump. In your views state **two** operation differences. **(4Marks)**
11. Many accidents are said to happen due to over speeding of vehicle. As NTSA technician what is the functions of a governor? **(3Marks)**
12. Fuel filter protects the critical parts of the engine, by filtering out foreign particles that can potentially damage fuel injectors. As a certified automotive technician give the justifications of fuel injector in the fuel system. **(2Marks)**

SECTION B: EXTENDED RESPONSE QUESTIONS (60 MARKS)

*In this section, you are required to attempt any **THREE** the questions.*

13. After graduating as an automotive technician, an automotive company employed you to be a workshop manager. With the aid of a circuit diagram explain the operation of a DPA circuit. **(20marks)**
14. A customer visits your workshop complaining faulty a inline pump. As a senior mechanic explain the procedure of phasing and calibration. **(20marks)**
15. Assume you are employed in an automotive workshop whose focus is to service vehicle fuel system. Illustrate using a diagram the construction and operation of a simple carburetor. **(20marks)**
16. A vehicle is brought to your workshop with a faulty hydraulic governor, illustrate with a neat sketch the construction and operation of a hydraulic governor. **(20marks)**