



**AES - Vehicle drive assistance and
Electronic system
T161
Friday, 23/7/2021
08:30 - 11:30 AM**

Names

Index number

TVET NATIONAL EXAMINATION, RTQF LEVEL 5, 2020-2021

QUESTIONS and ANSWERS BOOKLET

OPTION/TRADE: **AUTOMOBILE ELECTRICITY AND ELECTRONICS SYSTEMS**

SUBJECT: Vehicle drive assistance and Electronic system
ACADEMIC YEAR: 2020-2021

Read carefully the instructions on page (i) & (ii).

FOR EXAMINER'S USE ONLY

[illegible]



TVET NATIONAL EXAMINATION, RTQF LEVEL 5, 2020-2021

INSTRUCTIONS TO CANDIDATES: PART I (Answer Booklet)

1. A candidate should fill in the actual names and the index number on the cover of this questions and answer booklet on the provided place (Black Box).
2. It is illegal for a candidate to write any of his/her names, index number or a school name inside the answer booklet.
3. A candidate should check if all pages of the answer booklet are complete. No candidate should remove or tear any pages or part of it from the answer booklet.
4. A candidate should answer in the language in which the examination is set. (See page **(ii)**)
5. A candidate should sign on the sitting plan when submitting the answer booklet. He/she has also to check if the answer booklet is well sealed.
6. No extra paper is allowed in the examinations room. If a candidate is caught with it his/her results will be nullified.
7. No candidate is allowed to write answers not related to the subject being sat for, otherwise it will be considered as a cheating case.
8. Write your answers on the 12 lined pages (From page 1 of 12 to page 12 of 12).
9. Use the last non-lined pages as draft.
10. Results for any candidate who is caught in examination malpractices are nullified. The cheating can be recognized during examinations administration, marking exercise or even thereafter.

TVET NATIONAL EXAMINATION, RTQF LEVEL 5, 2020-2021

**OPTION/TRADE: AUTOMOBILE ELECTRICITY AND ELECTRONICS
SYSTEMS**

SUBJECT: Vehicle drive assistance and Electronic system

DURATION: 3 hours

INSTRUCTIONS TO CANDIDATES: PART II (Question Paper)

The paper is composed of two (2) Sections as follows:

Section I: Attempt all the Twelve (12) questions (60 marks)

Section II: Attempt any Four (4) questions out of Six (6) (40 marks)

Allowed materials:

- Ruler or square
- Calculator

Note:

Every candidate is required to carefully comply with the provided assessment instructions.

Section I : Attempt all the Twelve (12) questions **(60 marks)**

1. State any five (5) advantages of advanced driver assistance system. **5 marks**
2. Identify five (5) components of vehicle cruise control system. **5 marks**
3. What are the components of parking assistance system? **5 marks**
4. Mention any five (5) operating features for adaptive cruise control system. **5 marks**
5. What are components does airbag system contain? **5 marks**
6. Differentiate analogue instrument from digital instrument. **5 marks**
7. List five (5) different electrical and Electronics accessories system of motor vehicle. **5 marks**

8. State any five (5) components of immobilizer system components.

5 marks

9. The voltage measured across three 3 resistors connected in series are **5V**, **7V**, and **10V**; 2A supply current. Determine:

a) The supply voltage

b) The total circuit resistance.

5 marks

10. The resistor of **20 ohms**, **20 ohms** and **30ohms** are connected in parallel. What is the resistance must be added within combination to obtain a total resistance of **10 ohms**, if the complete circuit expends a power of 0.36 KW at the total current flowing?

5 marks

11. Identify five (5) components of power mirror

5 marks

12. State all things which can trigger car alarm in motor vehicle.

5 marks

Section II: Attempt any Four (4) questions out of Six (6)

(40 marks)

13. Explain ten (10) types of computers used in the cars.

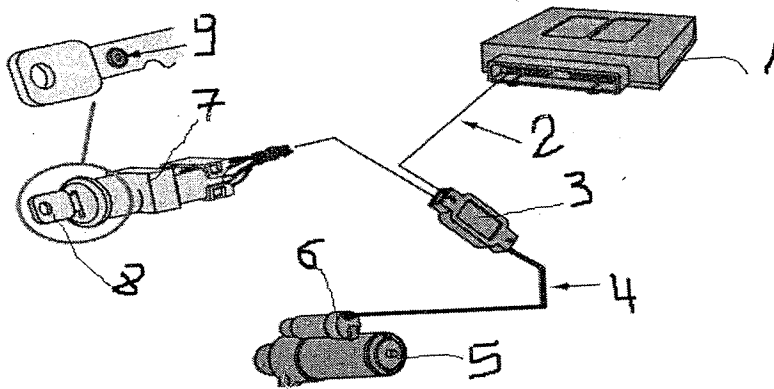
10 marks

14. a) Draw a simple motor reverse circuit.

b) i) What is the name of the figure below?

ii) Name the parts of the figure below.

10 marks



15. Draw the circuit diagram of exterior mirrors control system.

10 marks

16. a) Name five (5) components of vehicle adaptive cruise control system.

b) State at least ten (10) problems of cruise control system and their possible causes.

10 marks

17. a) What is the role of vehicle parking assisted system?

b) State any four (4) functions of vehicle parking assisted system.

c) Name five (5) components of vehicle parking assisted system.

10 marks

18. Identify the assemblage of an alarm system.

10 marks

