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higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

**T1250(E)(N25)T
NOVEMBER EXAMINATION
NATIONAL CERTIFICATE
MOTOR TRADE THEORY N2**

(11040662)

**25 November 2013 (X-Paper)
09:00–12:00**

Candidates will require drawing instruments, pens and a ruler.

This question paper consists of 4 pages.

DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA
NATIONAL CERTIFICATE
MOTOR TRADE THEORY N2
TIME: 3 HOURS
MARKS: 100

INSTRUCTIONS AND INFORMATION

1. Answer ALL the questions.
 2. Read ALL the questions carefully.
 3. Number the answers according to the numbering system used in this question paper.
 4. Write neatly and legibly.
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QUESTION 1

- 1.1 Explain, with the aid of a simple sketch, the self-adjusting action of disc brakes. (4)
- 1.2 What is meant by the term *brake fade* and what causes brake fades? (3)
- 1.3 Explain the term *self-energisation* when referring to drum brakes. (4)
- 1.4 State THREE advantages and THREE disadvantages of the *disc brake assembly* as compared to the *brake shoe assembly*. (6)
- 1.5 Explain the function of the check valve assembly as used in the braking system. (2)
- 1.6 What is the function of the compensator as used in the handbrake mechanism? (1)
- [20]

QUESTION 2

- 2.1 Make a line diagram/sketch of a fuel system showing ALL the components. (8)
- 2.2 Make a neat sketch of a float system as used in carburettors and explain its basic operation. (6)
- 2.3 Give THREE reasons for lack of fuel in the float bowl of a carburettor. (3)
- 2.4 State the function of the power circuit of a carburettor. (2)
- 2.5 Give TWO reasons for the carburettor flooding. (2)
- [21]

QUESTION 3

- 3.1 Name FIVE components of a conventional ignition system and state the function of each component. (10)
- 3.2 Explain TWO reasons for variance/jumping in ignition timing as viewed by a stroboscope (timing light). (2)
- 3.3 Give a brief explanation of the operation of the vacuum advance unit of a distributor. (3)
- 3.4 Explain the function of the fuel pump. (2)
- 3.5 State TWO types of air cleaners used in vehicles. (2)
- [19]

QUESTION 4

- 4.1 State TWO functions of King Pin Inclination. (2)
- 4.2 State THREE advantages of leaf springs as used in suspension systems. (3)
- 4.3 Make a sectional drawing of a worm and sector steering box. (8)
- 4.4 Give FIVE checks that must be performed before setting wheel alignment on a motor vehicle. (5)
- 4.5 Explain the term *kerb mass* of a vehicle. (2)
- [20]**

QUESTION 5

- 5.1 State TWO advantages and TWO disadvantages of using spur gears in a gearbox. (4)
- 5.2 State the SIX components in sequential order, when second gear is selected in a four-speed synchromesh gearbox. (6)
- 5.3 Explain the operation of the conventional differential (not final drive). (8)
- 5.4 What is the disadvantage of the conventional differential? (2)
- [20]**

TOTAL: 100