BASIC VEHICLE TECHNOLOGY 2
5150

CAMEROON GENERAL CERTIFICATE OF EDUCATION BOARD

Technical and Vocational Education Examination

JUNE XXXX **INTERMEDIATE LEVEL**

Subject Title	**BASIC VEHICLE TECHNOLOGY 2**
Subject Code No.	**5150**
Paper No.	**TWO**

Duration: 2h30min

You are reminded of the necessity for good English and orderly presentation in your answers.

SECTION A: Answer only THREE questions

1. Steering System

Figure 1 below represents steering system

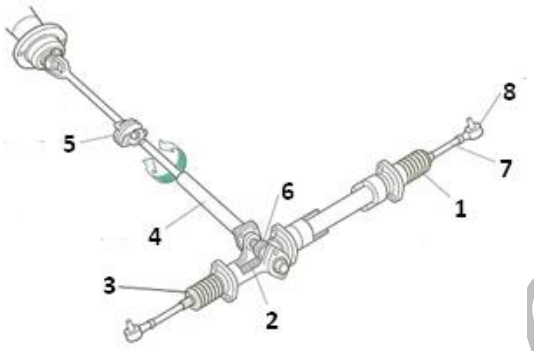

Figure 1

1.1 Identify the type of steering system (1mark)
1.2 State the function of the steering system (2marks)
1.3 Compare the type of steering represented by figure 1 to that of an axle beam steering system (3marks)
1.4 Explain why is the steering column made to have a crumple zone (4marks)

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2. Vehicle classification

The figures below represent different shapes of vehicle

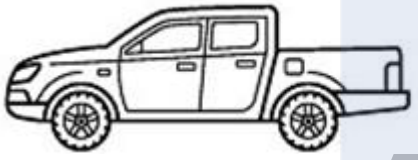
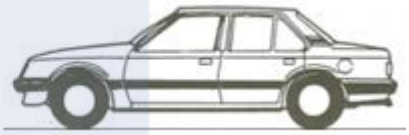


Figure 2

figure 3



figures 4

2.1 Name the various structures on the figures above **(1.5marks)**

Vehicle structure	Name of the structure
Figure 2	
Figure 3	
Figure 4	

2.2 Compare the vehicle structures on figure 2 and 4. **(4marks)**
2.3 Outline TWO other means by which you can use to classify vehicles **(2marks)**
2.4 Make a line diagram of a heavy duty vehicle **(2.5marks)**

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3. **Suspension System**

Figure 5 below shows a suspension system

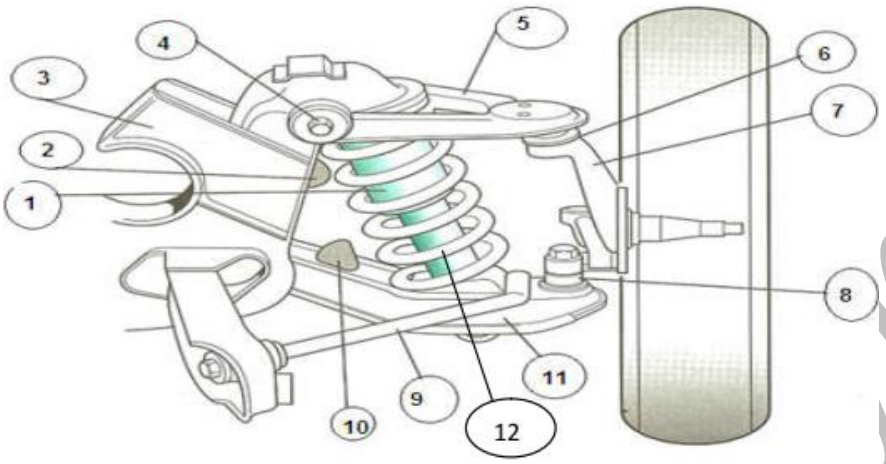

Figure 5

3.1 Identify the types of suspension system represented by figure 5 above **(1mark)**
3.2 Describe the procedure you use to dismount part 12. **(4marks)**
3.3 Explain what will happen if part 4 is not correctly mounted after a body work repair **(2marks)**
3.4 Give the function of part 1 of figure 5 above **(3marks)**

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4. **Final drive and differential system**

4.1 Draw a kinematic diagram of a differential unit of a rear wheel drive vehicle **(5marks)**
4.2 list FOUR parts of a differential unit **(2marks)**
4.3 Give TWO (2) possible faults that causes a differential unit to be noisy **(3marks)**

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5. **Figure 6 represents an air conditioning system**

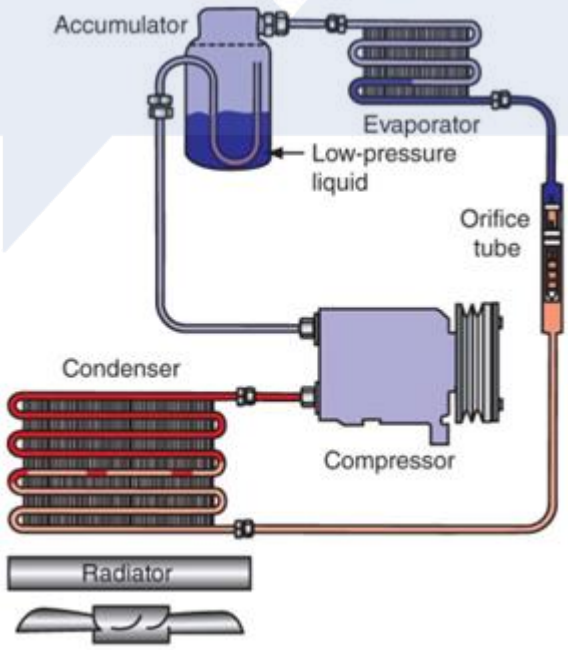

Figure 6

5.1 Outline the function of an air condition system in a vehicle **(2marks)**
5.2 Describe the area where the evaporator of this system is located **(2marks)**
5.3 Describe the logical procedure of removing and refilling A/C component. **(4marks)**

5.4 State ONE safety precaution to be observed when dismounting the AC system **(1mark)**

5.5 Name the part that drives the compressor of an air conditioning system **(1mark)**

SECTION B: Answer only TWO questions

6) The diagram (**figure 7**) below represents an ignition system

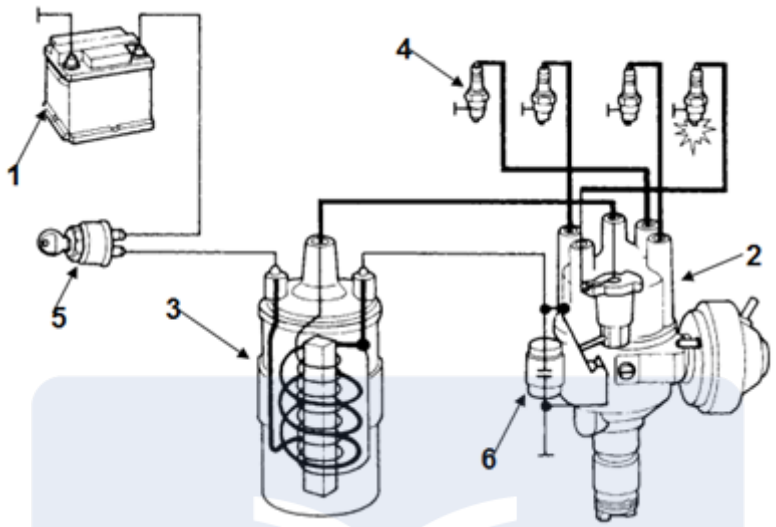

Figure 7

6.1 State the function of part **3** of figure **7.** **(2marks)**
6.2 Explain the operating principle of the ignition system represented by figure 7 above. **(4marks)**
6.3 Give Two precaution to be observed when working on this system **(3marks)**
6.4 State the name of the part that drives part **2** of figure **7.** **(1mark)**
6.5 Give a name to this kind of operating system **(1mark)**

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7. Figure 8 shows a starter motor

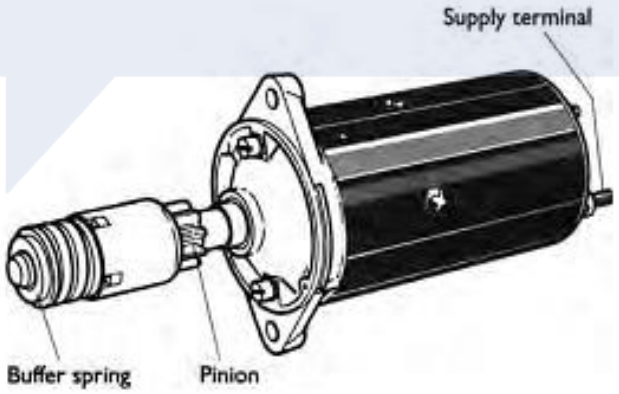

Figure 8

7.1 Identify the type of starter motor represented by **Figure 8** above **(1mark)**
7.2 List TWO other types of starter motor. **(2marks)**
7.3 Explain the reason why the cable connecting the starter motor and the battery are very thick. **(2marks)**
7.4 Locate the area on the vehicle where the negative terminal of the starter motor is connected **(1mark)**
7.5 Outline a logical procedure of dismounting and remounting a battery **(4marks)**

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8. **Charging System**

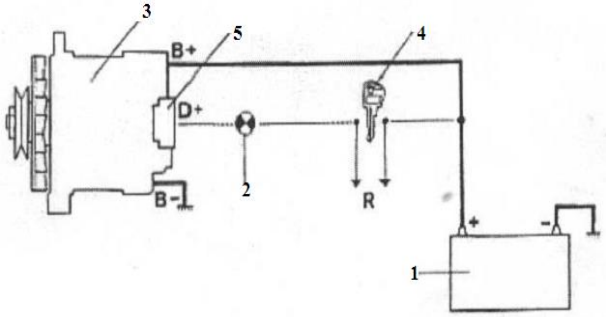

Figure 8

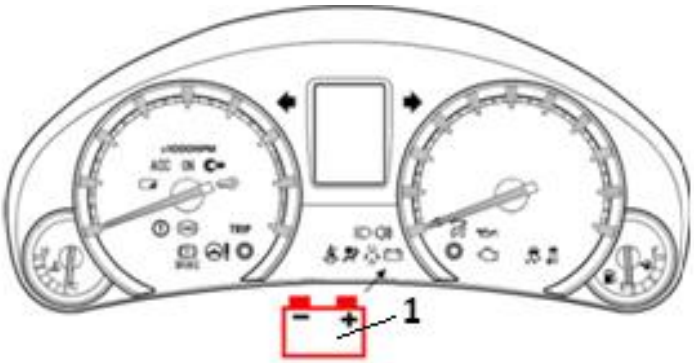

Figure 9

8.1 Give the function of the charging system on automobile system **(2 marks)**
8.2 List TWO system supplied by the charging system when the engine has started **(2marks)**
8.3 Give the use of the of the indication lamp on **Figure 9 above** represented by the **part 1** **(2marks)**
8.4 State the main organ of the charging system **(1mark)**
8.5 Describe how you will dismount and remount charging system parts on a vehicle **(3marks)**

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9. **The figure below represents a transmission organs of a rear wheel drive vehicle**

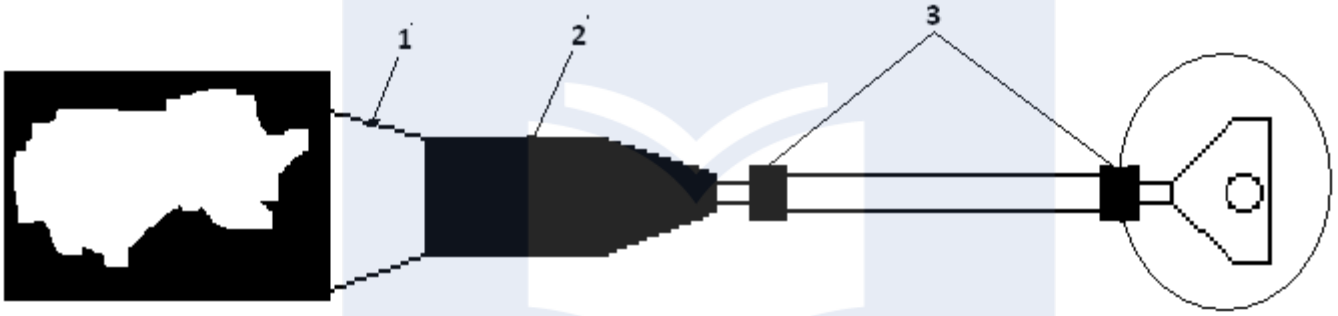

FIGURE 10

9.1 Identify the type of drive line represented in the **figure 10** above. **(1mark)**

Ref	Name of part	function
1		
3		

9.2 copy and complete the table ABOVE while referring to **figure 10** above. **(4marks)**
9.3 Give two functions of a final drive in a transmission system. **(2marks)**
9.4 Identify the various types of final drive shown in **figures 11, 12 and 13** below. **(3marks)**

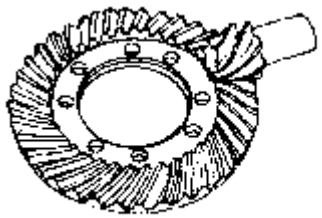

Figure 11

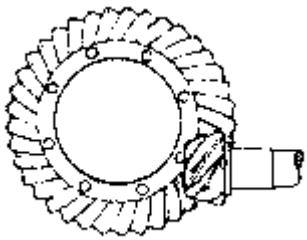

Figure 12

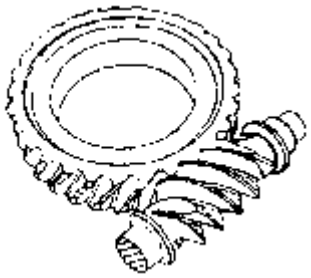

Figure 13