



Centre Number

71	
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Candidate Number

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General Certificate of Secondary Education
2014

Motor Vehicle and Road User Studies

Unit 1: Motor Vehicle and Road User Theory

Foundation Tier

[GMV11]

THURSDAY 5 JUNE, MORNING



TIME

1 hour 30 minutes.

INSTRUCTIONS TO CANDIDATES

Write your Centre Number and Candidate Number in the spaces provided at the top of this page.
Answer **all** questions.

INFORMATION FOR CANDIDATES

The total mark for this paper is 120.
Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.
Quality of written communication will be assessed in questions 49 and 50.

For Examiner's use only	
Question Number	Marks
1–4	
5–10	
11–20	
21–23	
24–27	
28–31	
32–35	
36–37	
38	
39–41	
42–44	
45–46	
47	
48–49	
50	
Total Marks	

Section A

Answer **all** questions.

Examiner Only	
Marks	Remark

- 1 On what type of road would you find this colour of sign?



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Fig. 1.1

_____ [1]

- 2 According to the Highway Code, you must not sound your horn in a built up area between the hours of _____ and 7.00 am. [1]

- 3 All children over the age of _____ must wear an adult seatbelt in a vehicle if one is fitted. [1]

- 4 The following vehicle markings are examples of _____ plates. [1]



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Fig. 4.1

5 The picture of the hazard below shows a
_____.

[1]



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Fig. 5.1

6 Good visibility is an example of _____ safety in car design. [1]

7 The maximum speed limit for a goods vehicle on a single carriageway is _____ . [1]

8 DVA enforcement officers stop vehicles to check for _____ . [1]

9 Rain which falls on a frozen surface results in _____ . [1]

10 A _____ is where a road crosses a railway. [1]

Examiner Only	
Marks	Remark

- 11 A _____ will be sent to the main driver to remind that insurance cover is coming to an end. [1]
- 12 A _____ lists a vehicle's details. [1]
- 13 Provisional licences, driving tests and speed limits were introduced in N.I. in _____ . [1]
- 14 The term used to describe buying a vehicle without trading in another against it is known as a _____ . [1]
- 15 Maintenance and fuel are two main examples of _____ costs. [1]
- 16 The second priority at the scene of an accident is to _____ . [1]
- 17 A _____ ignites the fuel in a petrol engine. [1]
- 18 The function of the _____ is to keep a battery recharged. [1]
- 19 The MacPherson strut is part of the _____ suspension system. [1]
- 20 The thermostat is part of the _____ system. [1]

Examiner Only	
Marks	Remark

Section B

Answer **all** questions.

21



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Fig. 21.1

The photograph in **Fig. 21.1** above shows a single track road.

State **two** things of which a motorist needs to be aware.

1. _____
_____ [1]

2. _____
_____ [1]

22 (a) What is the national speed limit?

_____ mph
[1]

(b) What is the maximum speed for a car towing a caravan?

_____ mph
[1]

23 Name the document you receive when waiting for your certificate of insurance to arrive.

_____ [1]

Examiner Only	
Marks	Remark

24 Identify **three** ignition system components from the list below.

- battery
- coil
- low tension leads
- high tension leads
- alternator
- spark plugs

- 1. _____ [1]
- 2. _____ [1]
- 3. _____ [1]

25



Fig. 25.1

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At the sign, **Fig. 25.1** above, would you be travelling uphill or downhill?

_____ [1]

26 (a) According to the Highway Code, state the only reason motorists should flash their headlights.

_____ [1]

(b) According to the Highway Code, when should front/rear fog lamps be switched on?

_____ [1]

27 Give the meaning of the following initials:

BHP _____ [1]

SORN _____ [1]

DVA _____ [1]

Examiner Only	
Marks	Remark

32 Name **two** penalties introduced in the Road Traffic (NI) Order 2007.

- 1. _____ [1]
- 2. _____ [1]

33 Apart from tyres, name **two** vehicle components which are currently tested in the MOT test.

- 1. _____ [1]
- 2. _____ [1]

34 Name the **two** restrictions placed on newly qualified drivers.

- 1. _____ [1]
- 2. _____ [1]

35 (a) If petrol costs £1.50/litre, calculate the cost of a journey if seven litres of petrol are used.

Answer £ _____ [1]

(b) Petrol and oil have to be mixed, in the ratio of 24:1, for a two stroke engine. If the fuel tank holds 30 litres, how much oil is required to mix with the petrol to fill the tank?

Answer _____ [2]

Examiner Only	
Marks	Remark

36 (a) Name **two** maintenance checks, apart from the concentration of anti-freeze, you could carry out on a vehicle's cooling system.

1. _____ [1]

2. _____ [1]

(b) Explain briefly how a cooling fan cools.

_____ [1]

(c) Explain briefly how air cooling works on an air cooled engine.

_____ [2]

37 (a) Where, on a roadway, would you find a cross wind?

_____ [1]

(b) Explain briefly what effect a cross wind would have on a vehicle.

_____ [1]

Examiner Only

Marks Remark

38 Study the road signs below.

Explain the meaning of each of the road signs Fig. 38.1 to Fig. 38.6 below.



Fig. 38.1



Fig. 38.2



Fig. 38.3



Fig. 38.4



Fig. 38.5



Fig. 38.6

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- Fig. 38.1 _____ [1]
- Fig. 38.2 _____ [1]
- Fig. 38.3 _____ [1]
- Fig. 38.4 _____ [1]
- Fig. 38.5 _____ [1]
- Fig. 38.6 _____ [1]

Examiner Only	
Marks	Remark

42 Suggest **two** disadvantages of having a space saver spare tyre.

1. _____ [1]
2. _____ [1]

43 (a) Calculate the average speed of a vehicle which takes $2\frac{1}{2}$ hours to travel 105 miles.

Answer _____ mph [1]

(b) Calculate the fuel consumption if the vehicle uses seven litres for the journey.

Answer _____ [1]

44 (a) Explain briefly the purpose of a differential.

_____ [1]

(b) Explain briefly the function of a timing chain/belt.

_____ [2]

(c) Explain why it is important not to be in an enclosed garage with a vehicle engine running.

_____ [1]

Examiner Only	
Marks	Remark



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Fig. 47.3

(d) Name **two** hazards in **Fig. 47.3** above.

1. _____ [1]

2. _____ [1]

Examiner Only	
Marks	Remark

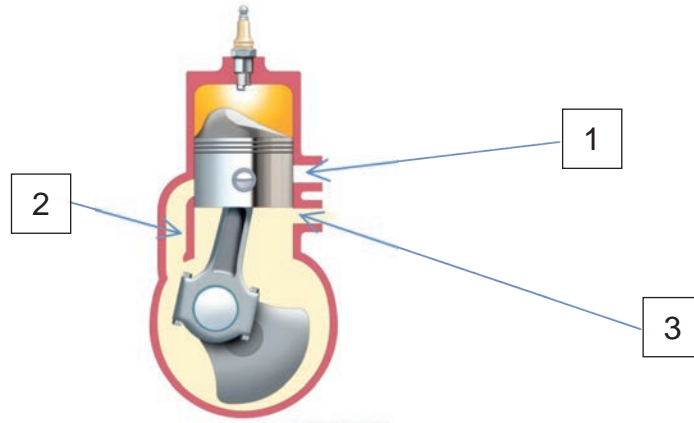


Fig. 48.1

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(a) Name the parts marked 1 to 3 in **Fig. 48.1** above.

- 1. _____ [1]
- 2. _____ [1]
- 3. _____ [1]

(b) Explain briefly why oil is added to the fuel in a two stroke engine.

_____ [1]

(c) Suggest **one** advantage of a two stroke engine.

_____ [1]

49 Describe briefly how you would take care while driving on rural roads.

_____ [6]

Examiner Only	
Marks	Remark

THIS IS THE END OF THE QUESTION PAPER

Source:

- Fig 1.1: *Highway code booklet;*
- Fig 4.1: *Highway code booklet;*
- Fig 5.1: *Google Images;*
- Fig 21.1: *Highway code booklet;*
- Fig 25.1: *Highway code booklet;*
- Fig 38.1: *Highway code booklet;*
- Fig 38.2: *Highway code booklet;*
- Fig 38.3: *Highway code booklet;*
- Fig 38.4: *Highway code booklet;*
- Fig 38.5: *Highway code booklet;*
- Fig 38.6: *Highway code booklet;*
- Fig 47.1: *Photograph (PX);*
- Fig 47.2: *Photograph (PX);*
- Fig 47.3: *Photograph (PX);*
- Fig 48.1: *MVRUS – ISBN 978-1-90-6578-31-2, (2009);*

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