

Centre Number	
71	

Candidate Number

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.

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



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[1	1	1
L	•	J

- 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

2

5 The picture of the hazard below shows a

Examiner Only		
Remark		

[1]

_____.



© Copyright Oliver Dixon http://creativecommons.org/licenses/by-sa/2.0/ (adapted) Fig. 5.1

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

T-1	7	The maximum speed	limit for a goods	vehicle on a sing	gle carriageway is
					[1]

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

11	A will be sent to the main		Examiner Only
	A will be sent to the main driver to remind that insurance cover is coming to an end.	[1]	Marks Remark
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]	
4 =	Maintagan as and five large true main averages of		
15	Maintenance and fuel are two main examples ofcosts.	- [1]	
16	The second priority at the scene of an accident is to		
		[1]	
17	A janitas the fuel in a petr	al.	
17	A ignites the fuel in a petro engine.	اد [1]	
18	The function of the is to keep a battery recharge	ed. [1]	
19	The MacPherson strut is part of the suspension		
	system.	[1]	
20	The thermostat is part of the system.	[1]	
	oyotom.	۲.1	

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	

24	Identify three ignition system components from the list below.		Examine Marks	er Only Remark
	battery coil			
	low tension leads			
	high tension leads alternator			
	spark plugs			
	1	[1]		
	2	[1]		
	3	[1]		
		[.,]		
25				
	20%			
	Fig. 25.1 © Crown copyright – Department of Transport			
	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 to	ne		
	switched on?			
		[1]		
27	Give the meaning of the following initials:			
	BHP	[1]		
	SORN	[1]		
	DVA			
		r - 1		

20	Exp	nam briefly the term - parallel parking .		Marks Remark
			[2]	
29	Sug	gest two reasons why roundabouts are used at major road junction	ns.	
	1.		_ [1]	
	2.		_ [1]	
30	(a)	List two ways in which driving can be affected by old age.		
		1	_ [1]	
		2	_ [1]	
	(b)	List two tendencies in young drivers which could make them an insurance risk.		
		1	_ [1]	
		2	_ [1]	
31	Wh	ich vehicle component:		
	(a)	removes oxides of nitrogen and waste gases from the cylinders?		
	()		_ [1]	
	(b)	allows the brakes to be applied with only a little pressure?		
			_ [1]	
	(c)	gives precise amounts of fuel to the cylinders?	_ [1]	

32	Name two penalties introduced in the Road Traffic (NI) Order 2007.	Examiner Only Marks Remark
	1	
	2	[1]
	2.	_ [']
33	Apart from tyres, name two vehicle components which are currently to in the MOT test.	ested
	4	[4]
	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 lit of petrol are used.	res
	or petror are used.	
	A O	F41
	Answer £	_ [1]
	(h) Detrol and all have to be mixed in the ratio of 2444 for a true atrol	
	(b) Petrol and oil have to be mixed, in the ratio of 24:1, for a two strok engine. If the fuel tank holds 30 litres, how much oil is required to	
	with the petrol to fill the tank?	
	Answer	_ [2]

36	(a)	Name two maintenance checks, apart from the concentration of anti-freeze, you could carry out on a vehicle's cooling system.		Examiner Marks I	Only Remark
		1	_ [1]		
		2	_ [1]		
	(b)	Explain briefly how a cooling fan cools.			
	(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?			
	(b)	Explain briefly what effect a cross wind would have on a vehicle.	_ [1]		
			[1]		

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







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]

39	(a)	Name two legal obligations if you are involved in an injury accident.		Examine	er Only
		4	F41	Marks	Remark
		1	[1]		
		2	[1]		
	(b)	State two pieces of information you could provide when calling the emergency services at the scene of an accident.			
		1	[1]		
		2	[1]		
	(0)	Explain briefly boyy you would treat an incided would			
	(C)	Explain briefly how you would treat an incised wound.			
			[1]		
40	(a)	Apart from a scooter or motorcycle rider, name one other road user			
		who must wear a helmet.			
			[1]		
	(h)	Suggest two reasons why a motorcyclist should wear leathers.			
	(D)	Suggest two reasons why a motorcyclist should wear leathers.			
		1	[1]		
			[4]		
		2	[1]		
41	(a)	In the driving test, how far ahead must a candidate be able to read a			
• •	(~)	number plate?			
			F41		
		·	[1]		
	(b)	Explain briefly what is meant by peripheral vision.			
			[1]		

42	Sug	ggest two disadvantages of having a space saver spare tyre.	Examiner Only Marks Rema	
	1.			
	2.		[1]	
43	(a)	Calculate the average speed of a vehicle which takes $2\frac{1}{2}$ hours to tra	vel	
	` '	105 miles.		
		Answer mph	[1]	
		,oo.	1.1	
	(b)	Calculate the fuel consumption if the vehicle uses seven litres for the journey.	ne	
		journey.		
		Answer	[1]	
4.4	(0)	Explain briefly the purpose of a differential		
44	(a)	Explain briefly the purpose of a differential.		
			[41]	
			[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.		
	(c)		[1]	

45	(a)	Name two actions you cannot take on the hard shoulder of a motorway.		Examiner (Only emark
		1	[1]		
		2	[1]		
	(b)	What action should you take if you see an object which has fallen the motorway?	onto		
			[1]		
46	(a)	How can motorcyclists protect themselves from the noise of a motorbike?			
			_ [1]		
	(b)	Name two advantages of sound insulation in a motor vehicle.			
		1	[1]		
		2	[1]		

47 Study the photographs Fig. 47.1 to Fig. 47.3.



Fig. 47.1

(a) Name one hazard for pedestrians in Fig. 47.1 above.

_____ [1]



Fig. 47.2

(b) Name the traffic management technique shown in Fig. 47.2 above.

(c) Name two hazards a driver could face in Fig. 47.2.

1. ______ [1]

2. ______[1]

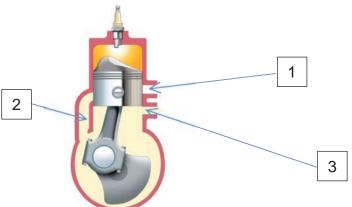


Fig. 47.3

(d)	Name 1	two	hazards	in	Fig.	47.3	above.	
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1. ______[1]

2. _____ [1]

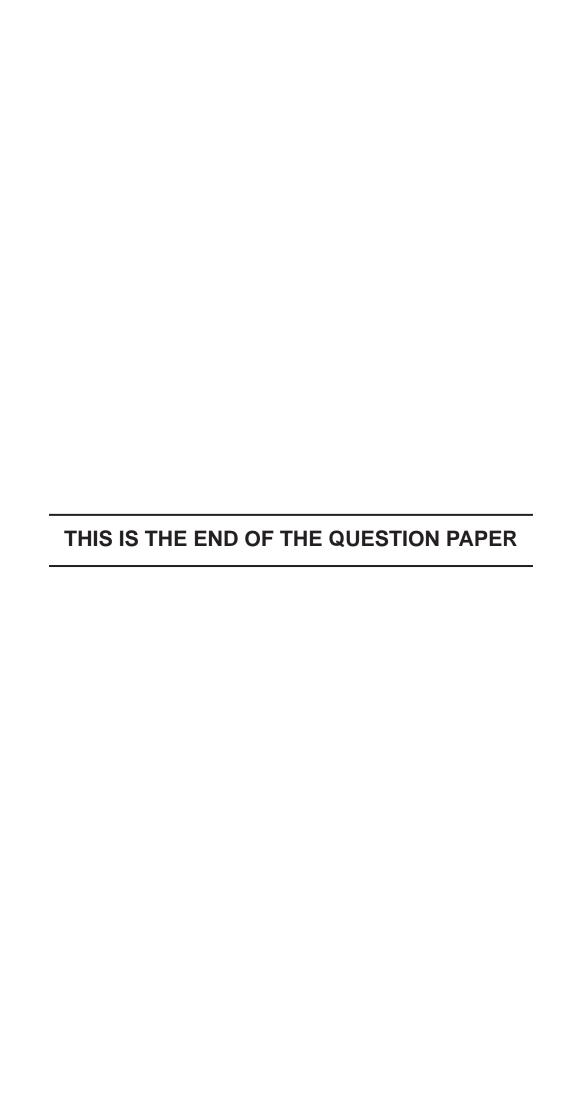


Examiner Only

Marks Remark

	3	
	Fig. 48.1 © Motor Vehicle and Road User Studies by E McPolin, published by Colourpoint Books, 2009. ISBN 9781906578312	
(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.	
		_ L'
(c)	Suggest one advantage of a two stroke engine.	
		_ [1
Des	scribe briefly how you would take care while driving on rural roads.	
		_ [6

50 Road users have to be responsible for their safety at all times. **Examiner Only** Marks Remark Discuss this statement, making reference to the pedestrian and to the motorist. Explain how different times of the day can affect their behaviour. _____ [12]



Source:

- Fig 1.1: Highway code booklet; Highway code booklet; Fig 4.1: 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);