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General Certificate of Secondary Education 2013

Motor Vehicle and Road User Studies

Unit 1: Motor Vehicle and Road User Theory

Foundation Tier [GMV11]

THURSDAY 16 MAY, MORNING



For Examiner's use only				
Question Number	Marks			
1–3				
4–9				
10–14				
15–20				
21				
22				
23				
24				
25				
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36				
37				
38				
39				
40				
41				
42				
40				

Total	
Marks	

43 44

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 question **44**.

Section A

Examiner Only

Marks Remark

Answer all questions.

1 Which warning sign, (a), (b) or (c) below, would be used to highlight the hazard on the road ahead?

Answer _____ [1]



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Fig. 1.1



(a)



(b)



(c)

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crossings allow cyclists and pedestrians to sharecrossing space and cross at the same time.

is a word used to describe travelling in a neutral gearor with the clutch pressed down.

2

Advice given in the Highway Code to assist all road users crossing a	road Examine
is referred to as the	
·	[1]
is another word used to describe tiredness.	[1]
A broken down vehicle which is parked along the side of a road shou	ld
have its lights on.	[1]
Engineering, and Education are all methods us	ed to
help reduce road accidents.	[1]
An endorsable ticket issued by the police imposes a fine and	
·	[1]
The arm signals below mean: Stop, traffic is approaching from both for	ront
and	[1]
Fig. 9.1	

Fig. 9.1

© Crown copyright – The Official Highway Code for Northern Ireland, 2008.

10 What is the name given to the road markings below? _ _____[1] Fig. 10.1 © Crown Copyright - Department for Transport 11 A document which provides details about legal proof of insurance is [1] known as the Insurance ______. **12** Which **one** of the following is the odd one out? Answer _____ [1] MOT V5 Tax Petrol Driving Disc Receipt Certificate Form Licence 13 Hydrocarbons and carbon monoxide are two examples of [1] _____ is the term used to describe a vehicle which is bought without trading another in. [1]

15	15 A Honda jeep costs £9,000. I can either pay £255 a month for three years				
	or pay cash. If I pay cash, I	would save £	[1]		
16	A casualty who looks pale, f	eels faint or dizzy and is very thirsty is likely	y to		
	be suffering from	·	[1]		
17	A con	trols the temperature of water in a vehicle's			
	cooling system.		[1]		
18	The cylinder below is on the	stroke.	[1]		
		Fig. 18.1 pad Users Studies by Eamonn McPolin, pint Books, 2009. ISBN 9781906578312			
19	The a	llows one rear wheel to turn faster than the			
	other when going round corn	ners.	[1]		
20	The component fitted to a ve	ehicle's exhaust pipe to reduce noise is kno	own		
	as ab	ox.	[1]		

Section B

Examiner Only Marks Remark

Answer all questions.

me one ite	-	v, must be kept clean on a motor veh	
a) State the	legal limit for a	cohol in:	
1. breath		micrograms per 100 ml.	[1]
2. blood		milligrams per 100 ml.	[1]
2		lettering on	
Apart from a∃	back nelmet, name tv g should wear.	ground. vo articles of appropriate clothing wh	[2] nich each
Cyclist	1		[1]
	2		[1]
Motorovolist	1		[4]
Motorcyclist			
	2.		[1]

26	(a)	Apart from the legal requirement, explain briefly why a motorist no insurance.	Examiner Only Marks Remark
	(b)	List three reasons why young, newly qualified, male drivers are a insurance risk.	a high
		1	[1]
		2	[1]
		3	[1]
27	Giv	e the meanings of the following initials:	
	ABS	S	[1]
	SO	RN	[1]
	PC	V	[1]
28	(a)	At night, when should a driver use his/her main beam?	
			[1]
	(b)	Under what circumstances should a driver adjust the vehicle's headlights?	
			[2]

29	Suggest a time when the part-time signals in Fig. 29.1 below would
	operate.

Examiner Only			
Marks	Remark		

_____[1]



© John McMorrow / CCEA Fig. 29.1

30 Examine Fig. 30.1 below carefully.

Describe **two** hazards in the photograph.

1.			

_____[1]

2. _____

_____[1]



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Fig. 30.1

1. 2. 3.	safety features found on mode	ern cars.
2		
2		
3		
3		
		[1]
(b) Name two ways in which motor vehicle pollution has been reduced discouraged.	ch motor vehicle pollution has b	een reduced or
1		
2		
		[1]
(c) Examine Fig. 31.1 below carefully.	ow carefully.	
Apart from ramps, name one traffic calming feature you would expect to find here.	e one traffic calming feature yo	u would expect
		[1]

Examiner Only

Marks Remark



© John McMorrow / CCEA Fig. 31.1

32	(a)	A car costs £15,300. Calculate the monthly repayments over 36 months.	Examine Marks	Remark
		Answer £ [1]		
	(b)	The buyer decides to make a 20% deposit to buy the car, with repayments over 36 months. Calculate the monthly repayments.		
		Answer £ [2]		
	(c)	Calculate the distance a vehicle would travel with a 15 gallon tank and a fuel consumption of 55 mpg.		
		Answer miles [1]		

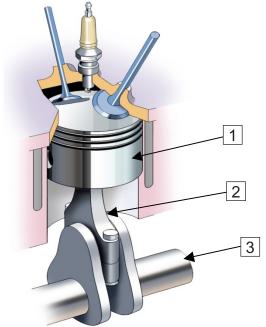
2. 3. (b) At ve	t the scene of an accident, list two ways in which you could make chicle safe.	_ [1] _ [1] • a	
3. (b) At ve	t the scene of an accident, list two ways in which you could make whicle safe.	_ [1] · a	
(b) At ve	t the scene of an accident, list two ways in which you could make ehicle safe.	a	
ve 1.	ehicle safe.		
		[1]	
2.			
		_ [1]	
	part from the engine, suggest a source of the power for power eering.	_ [1]	
(b) E	xplain briefly a compression ratio of 12:1, in relation to combustion		
_		_ [1]	
	ist two reasons why regular maintenance checks are necessary o notor vehicle.	on a	
1.		_ [1]	
2.		_ [1]	
(d) Lis	st two items which you should check weekly on your vehicle.		
1.		_ [1]	
2.	·	_ [1]	

35 Give the meaning of each of the road signs shown in Fig. 35.1–35.6 **Examiner Only** below, as stated in the Highway Code. Fig. 35.1 Fig. 35.2 Fig. 35.3 Fig. 35.4 Fig. 35.5 Fig. 35.6 © Crown Copyright - Department for Transport Fig. 35.1 ______[1] Fig. 35.2 _____[1] Fig. 35.3 ______[1] Fig. 35.4 ______[1] Fig. 35.5 _____[1] Fig. 35.6 _____[1] **36** (a) Explain briefly why the two second rule is important to road safety. (b) Under what circumstances should the two second rule be increased? ______[1]

(a)	Explain briefly the purpose of a vehicle's suspension system.	Examin Marks	er Only Remark
		_ [1]	
(b)			
		[1]	
(c)	Apart from causing the car to stop, why is it important to ensure the car's fuel tank is never completely emptied?	at a	
		 _ [1]	
(a)	Explain briefly what a blind spot is.		
(b)	Where, on a country road without a footpath, should a pedestrian walk?	[1]	
		_ [1]	
(c)	Name two dangers which might be experienced when driving on ruroads.	ıral	
	1	_ [1]	
	2	_ [1]	
	(b) (c)	(c) Apart from causing the car to stop, why is it important to ensure the car's fuel tank is never completely emptied? (a) Explain briefly what a blind spot is. (b) Where, on a country road without a footpath, should a pedestrian walk? (c) Name two dangers which might be experienced when driving on ruroads. 1.	(b) Explain briefly the purpose of a valve spring. [1] (c) Apart from causing the car to stop, why is it important to ensure that a car's fuel tank is never completely emptied? [1] (a) Explain briefly what a blind spot is. [1] (b) Where, on a country road without a footpath, should a pedestrian walk? [1] (c) Name two dangers which might be experienced when driving on rural



_ [2]

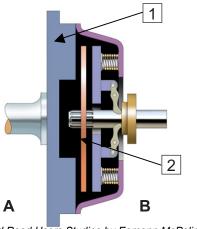


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Fig. 39.1

(a)	Name the parts marked 1 to 3 in Fig. 39.1 above.	
	1	[1]
	2	[1]
	3	[1]
(b)	Explain briefly how linear motion is changed into circular motion in a car engine.	3
		_

(c)



© Motor Vehicle and Road Users Studies by Eamonn McPolin, published by Colourpoint Books, 2009. ISBN 9781906578312 Fig. 39.2

Name the parts marked 1 and 2 in Fig. 39.2 above.

1		[4]	1
1	•	LI	J

(d)	Explain briefly the function of a clutch.	
-----	---	--

[4]			

(e) On which side of the clutch in Fig. 39.2 would you expect to find the engine? Answer A or B.

[1	1
•	-

40	(a)	Apart from resting the night before, list two ways you could prepare for a long car journey.	Examiner Only Marks Remark
		1	[1]
		2	. [1]
	(b)	Apart from checking fuel, list two ways you could prepare your vehicle for a long journey.	
		1	[1]
		2	. [1]
	(c)	Suggest one reason why speed limits are lower on single carriagev roads rather than on dual carriageways or motorways.	vay
			[1]
41	(a)	The maximum speed limit on a motorway is m	nph. [1]
	(b)	Name the approach road used when joining a motorway.	
			[1]
	(c)	What action must you take if you have missed your exit on the motorway?	
			[1]
	(d)	Name two vehicles restricted from using the third, outside lane of a motorway.	
		1	[1]

42	Apart from overtaking, name two occasions when a driver would use Non a motorway.	//SM	Examin Marks	er Only Remark
	1	_ [1]		
	2			
43	Describe briefly what you should do if your vehicle breaks down on a motorway.			
		_ [⊙]		

Safe driving involves observation, courtesy and anticipation. Explain briefly how this can be achieved, using the headings below.	У	Examin Marks	er Or Ren
Observation			
	-		
	-		
	-		
	-		
Courtesy			
	-		
	-		
	-		
	•		
	-		
	-		

Anticipation			
			[12]

Examiner Only

Marks Remark