

Rewarding Learning

**General Certificate of Secondary Education** 

2010

# **Motor Vehicle and Road User Studies**

Paper 1 Higher Tier

[G6803]

#### **WEDNESDAY 19 MAY, MORNING**

TIME

2 hours.

### INSTRUCTIONS TO CANDIDATES

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

Write your answers in the spaces provided in this question paper.

Answer all thirty-three questions.

You are provided with an insert for use with Questions 17 and 18 in this paper.

Do not write your answers on this insert.

### INFORMATION FOR CANDIDATES

The total mark for this paper is 180.

Quality of written communication will be assessed in Questions 31, 32 and 33.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

You are advised to spend approximately 45 minutes on Section A and 75 minutes on Section B.

You may use an electronic calculator.



Student Bounty Com

For Examiner's use only		
Question Number	Marks	
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		

Total	
Marks	

### **Section A**

You must answer all eighteen questions.

You should spend approximately **45 minutes** on this section.

1 Where on a city road might a cyclist feel safer?

\_\_\_\_\_ [1]

2



Fig. 2.1

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What signal is being given by the motorcyclist in Fig 2.1 above?

\_\_\_\_\_\_[1]

3 State the minimum tyre tread depth over the centre three quarters of a tyre for a car.

\_\_\_\_\_mm [1]

4 (a) Name one vehicle fluid level which is examined in the MOT test.

\_\_\_\_\_[1]

**(b)** What damage could be caused to an engine without antifreeze in the cooling system during the winter?

\_\_\_\_\_

\_\_\_\_\_

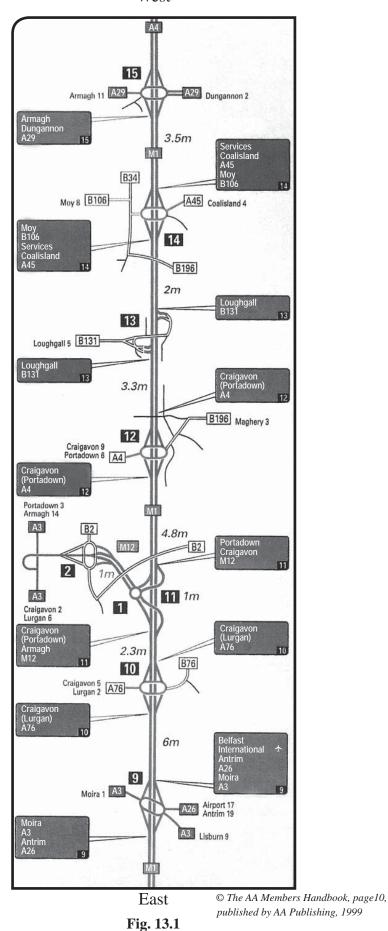
	On a dual carriageway, how far behind a broken down vehicle shoul warning triangle be placed?	Marks I
		[1]
<b>(b)</b>	What action should you take when finding a piece of debris on the motorway?	
		[1]
Wr	ite down <b>three</b> actions of another motorist which might irritate a driv	er.
1.		
2.		
3.		[3]
Wr	ite down <b>three</b> places where it is illegal to park.	
	ite down <b>three</b> places where it is illegal to park.	
<ol> <li>2.</li> </ol>		[3]

a change to your personal details.		
1		
2	[2]	
List <b>three</b> hazards which a motorist might meet when driving on country roads.	y	
1		
2		
Name <b>three</b> actions you could take to make a vehicle safe following a collision.		
1		
2		
3	[3]	

11	(a)	State why a rear-facing baby seat must not be used in the front passenger seat of a vehicle if the seat is protected by an active fronta air bag.	Ma	xaminer Only arks Rema	
			[2]		
	(b)	Name <b>three</b> legal requirements for a passenger supervising a learner driver.			
		1			
		2			
		3	[3]		
12	larg	t <b>two</b> advantages and <b>two</b> disadvantages for electric, tracked trams in a ge city.  vantages 1			
		2	_		
	Dis	dvantages 1			
		2	[4]		

### M1 Moira-Dungannon

West



**Examiner Only** Marks Remark

	(a)	What is the distance between junction 15 and junction 12?	Examine	er Only
		· · · · · · · · · · · · · · · · · · ·	Marks	Remark
		[1]		
	<b>(b)</b>	What feature shown at junction 11 is very rarely seen on a motorway?		
	(D)	what readure shown at junction 11 is very farely seen on a motorway:		
		r11		
		[1]		
	<b>(c)</b>	At which junction would you leave the motorway to travel to Belfast		
		International Airport and how much further would you have to travel?		
		<b>Junction</b>		
		miles [2]		
		mmes [2]		
	<b>(L)</b>	If to to 11' to to to to to to to to to		
	<b>(a)</b>	If you were travelling west and wanted to go to Armagh, but wanted to		
		travel on the motorway as far as possible, at what junction would you		
		exit for Armagh?		
		[1]		
14	(a)	What could a motorist look for when checking a vehicle's tyres? Give		
	( )	two answers.		
		1		
		1		
		2		
		2[2]		
	<b>(b)</b>	Write down <b>one</b> action of a driver which would accelerate tyre wear.		
		[1]		

15	(a)	List <b>two</b> factors which could cause aquaplaning.	Examiner Only  Marks Rema	
		1		
		2	[2]	
	(b)	List <b>two</b> reasons why most traffic collisions occur in daylight and in fine weather.		
		1	_	
		2	[2]	
16	(a)	Describe briefly the operation of the following vehicle components:		
		gearbox		
		clutch		
			[2]	
	(b)	Explain briefly the operation of a vehicle's mechanical and hydraulic braking systems.		
		mechanical braking	_	
			[2]	
		hydraulic braking		
			[2]	
			[-]	

17	Stu	dy photographs Fig. 17.1 and Fig. 17.2 on page 1 of the insert sheet.	Exa Mar	aminer Only ks Remark
	(a)	Name <b>one</b> hazard which a motorist would face.		
		Fig. 17.1		
		Fig. 17.2	[2]	
	(b)	In <b>Fig. 17.1</b> , apart from slowing down, name one action a driver could be prepared to take.	ld	
			[1]	
18	Exp sign	dy the road signs on page 2 of the insert sheet.  clain the meaning, as stated in the Highway Code, of each of the road as Fig. 18.1 to Fig. 18.6.		
	Fig	. 18.2		
	Fig	. 18.3		
	Fig	. 18.4		
	Fig	. 18.5		
	Fig	. 18.6	[6]	

# **Section B**

Examiner Only

Marks Remark

You must answer all fifteen questions.

You should spend approximately **75 minutes** on this section.

	insurance certificate	no claims discount	premium
	policy holder	insurance company	
The		_ had an accident. He phor	ned
the		_ right away. He was able to	o produce
his		to the police within twent	y four hours.
His		_ will not increase as	
his		_ was protected.	[5
(a)	Name the medical condition victim wandering at or near t		
(a)	victim wandering at or near to medical condition	the scene in a dazed or con	fused manner.
(a)	victim wandering at or near	the scene in a dazed or con	fused manner.
	victim wandering at or near to medical condition	the scene in a dazed or con	fused manner.
	victim wandering at or near to medical condition treatment Explain why it is important to the second secon	the scene in a dazed or con	fused manner.  [2 hing to drink.
(b)	victim wandering at or near to medical condition treatment Explain why it is important to the second secon	the scene in a dazed or contact to give this patient anythe	fused manner.  [2 hing to drink. [1
<b>(b)</b>	wictim wandering at or near to medical condition  treatment  Explain why it is important reading Give two reasons for placing	not to give this patient anyt	fused manner.  [2]  hing to drink.  [1]  ning casualty in

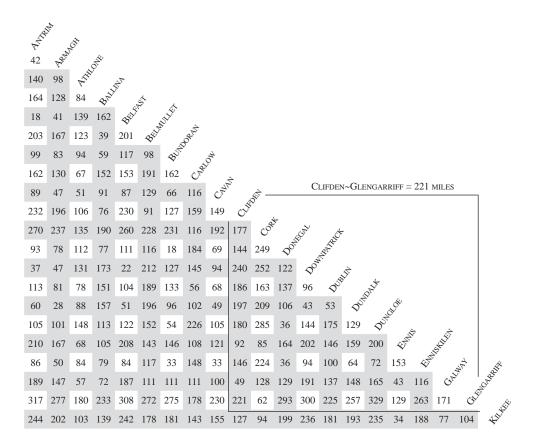


Fig. 21.1

© The AA Members Handbook, page 98, published by AA Publishing, 1999

(a) Study the distance chart shown in **Fig. 21.1** above. What is the distance in miles from:

1. Armagh to Donegal?

2. Belfast to Dublin? \_\_\_\_\_\_ [2]

(b) Motorist A leaves Antrim at 11.00 hrs to travel to Enniskillen.

Motorist B leaves Downpatrick at 10.45 hrs to travel to Enniskillen.

If both motorists A and B travel at the same average speed of 60 MPH, which will get to Enniskillen first and by how many minutes?

Show your calculations.

Motorist\_\_\_\_\_

Ford Ka  1 day £25 2 days £50 3 days (w'end special) £60 4+ days £17.50/day 7+ days £17.50/day >14 days £15/day >28 days see DD  Ford Fiesta  1 day £30 2 days £60 3 days (w'end special) £75 4+ days £25/day 7+ days £20/day >14 days £20/day >2 days £00 3 days (w'end special) £75 4+ days £20/day >28 days see DD  (a) How much cheaper is it to hire a Ford Fiesta for three days at the weekend than three days mid-week?  [3]  (b) What is the difference in hiring a Ford Ka for 6 days or hiring it for 7 days?  [3]	The table below show	vs a quick ref	erence price guide to Ford	l Rental.	Examin Marks
Ford Fiesta  1 day 2 days 560 3 days (w'end special) 4+ days 525/day 7+ days 514 days 517.50/day 528 days  (a) How much cheaper is it to hire a Ford Fiesta for three days at the weekend than three days mid-week?  [3]  (b) What is the difference in hiring a Ford Ka for 6 days or hiring it for 7 days?	1 day 2 days 3 days (w'er 4+ days 7+ days >14 days	nd special)	£50 £60 £20/day £17.50/day £15/day		
weekend than three days mid-week?	Ford Fiesta 1 day 2 days 3 days (w'er) 4+ days 7+ days >14 days	nd special)	£30 £60 £75 £25/day £20/day £17.50/day		
[3]	weekend than the diffe	ree days mid-	week?		[3]
					[3]

### 23 Fig. 23.1 below shows a typical engine configuration.

Name the parts marked (i) to (vi).

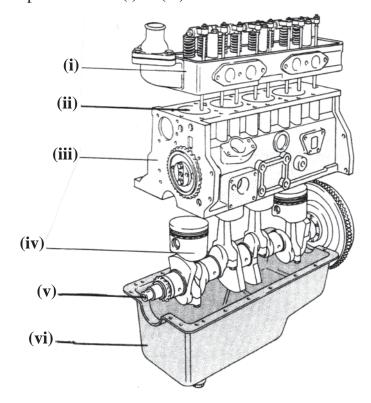


Fig. 23.1

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- (i) \_\_\_\_\_
- (ii) \_\_\_\_\_
- (iii) \_\_\_\_\_
- (iv) \_\_\_\_\_
- (v) \_\_\_\_\_
- (vi) \_\_\_\_\_\_ [6]

24		en planning and designing a new road, the effects it may have on the ironment are examined carefully by the design team.		Examine Marks	er Only Remark
		each of the factors listed below, comment on how its impact on the ironment can be minimised.			
	1.	Traffic noise			
	2.	Visual impact			
			_		
	3.	Heritage and conservation			
			<u> </u>		
25	The	police have a general right to stop motor vehicles.			
	(a)	Give <b>two</b> occasions when a police officer may stop a motor vehicle.  1			
		2			
	(b)	The police can require a driver to produce certain documents. What are they?			
		1			
		2.         3.			
		<u> </u>	[~]		

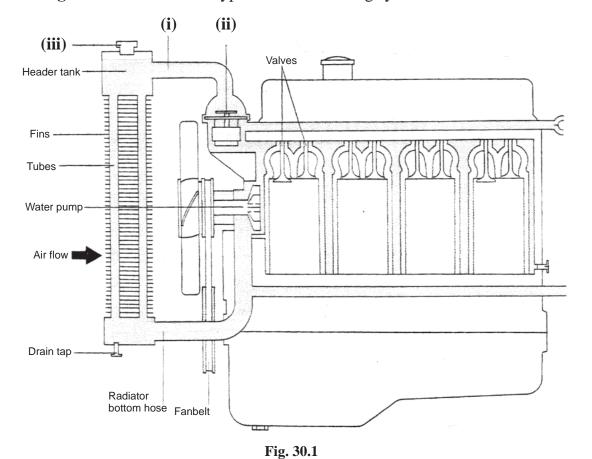
	(c)	If the driver is a learner driver, the police can ask for an additional document. What is it?	Exai Mark	niner Only s Remark
	(d)	If the documents referred to above are not immediately available, wl must the driver do?	nat	
	(e)	The police may deal with a traffic offence in three ways. Name <b>two</b> these.	[2] of	
		1		
26	(a)	Describe briefly the purpose of the coil in the ignition system.		
	(b)	How is the electrical power delivered to the spark plugs?	[1]	
			[2]	
	(c)	List <b>three</b> basic maintenance checks which should be carried out on electrical system.		
		1		

		g journey, using the headings below.	a	Marks R	only emarl
	Bef	ore leaving			
	— Plar	nning the journey			
28	(a)	Apart from your name and address, list <b>three</b> additional pieces of			
	(44)	information required when applying for a driving licence.  1			
		2.       3.			
	<b>(b)</b>	Where should the completed form be sent in  N. Ireland?			
		England/Wales?	[2]		
	(c)	Write down <b>two</b> driving skills which can be affected by alcohol/dru			

	<b>(d)</b>	Apart from legal punishment, list <b>three</b> financial costs to a motorist following a drink driving conviction.	-	Examine Marks	er Only Remark
		1			
		2			
		3			
29	(a)	Explain what is meant by the "two second rule".			
			[3]		
	<b>(b)</b>	Explain how this rule is a valuable aid to road safety.			
	(c)	Write down <b>three</b> conditions which may mean that the rule would rapply.	not		
		1			
		2			
		3	[3]		

**30** Fig. 30.1 below shows a typical vehicle cooling system.





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(a) Write down the names of the parts labelled (i) to (iii).

(0)			
(i)			
<b>(1</b> )			

**(b)** A drain tap is shown on the diagram. When might you want to drain the radiator?

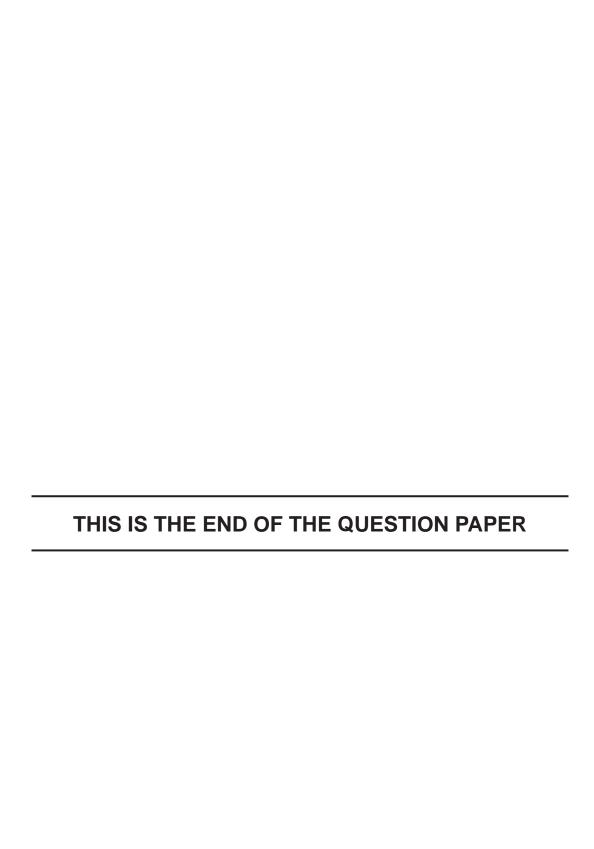
			Γ1 <sup>-</sup>

What are these <b>two</b> components?		
•		
2	[2]	
Why is this necessary?		
	[1]	

Give your views on this statement making reference in your answer to	
risibility, observation and anticipation for both pedestrians and motorists	

ions. Make reference in your answer to education and enforcement ures.	eved in the 1980s and 1990s. This appears to have slowed down opped. Suggest what new measures could be used to bring further	er -
	ctions. Make reference in your answer to education and enforced	ment

Motorway driving demands attention to special rules which are addition	al	s Rei
to those which apply to everyday road use. Outline what special rules ap	pply	
and what dangers are more evident on motorways.		
	[12]	



# **GCSE Motor Vehicle and Road User Studies 2010**

# Paper 1 Higher Tier

[G6803]

For use with Question 17



Fig. 17.1



Fig. 17.2

### For use with Question 18



Fig. 18.1



Fig. 18.2



**Fig. 18.3** 



Fig. 18.4



Fig. 18.5



Fig. 18.6

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