Rewarding Learning

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

## TIME

1 hour 30 minutes, plus your additional time allowance.

## 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.


| For Examiner's use only |  |
| :---: | :---: |
| Question Number | Marks |
| 1-3 |  |
| 4-9 |  |
| 10-14 |  |
| 15-20 |  |
| 21 |  |
| 22 |  |
| 23 |  |
| 24 |  |
| 25 |  |
| 26 |  |
| 27 |  |
| 28 |  |
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| 30 |  |
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| 32 |  |
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| 35 |  |
| 36 |  |
| 37 |  |
| 38 |  |
| 39 |  |
| 40 |  |
| 41 |  |
| 42 |  |
| 43 |  |
| 44 |  |
| Total Marks |  |

## Section A

Answer all questions.

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

## Answer

$\qquad$


Fig. 1.1

© Crown Copyright - Department for Transport
$\qquad$ crossings allow cyclists and pedestrians to share crossing space and cross at the same time.
$\qquad$ is a word used to describe travelling in a neutral gear or with the clutch pressed down.

4 Advice given in the Highway Code to help all road users crossing a road is called the $\qquad$
$\qquad$ .

5 $\qquad$ is another word used to describe tiredness.

6 A broken down vehicle which is parked along the side of a road should have its $\qquad$ lights on.

7 Engineering, $\qquad$ and Education are all methods used to help reduce road accidents.

8 An endorsable ticket issued by the police imposes a fine and
$\qquad$ .

9 The arm signals below mean: Stop, traffic is approaching from both front and $\qquad$ .


Fig. 9.1
© Crown copyright - The Official Highway Code for Northern Ireland, 2008.

10 What is the name given to the road markings below?

11 A document which provides details about legal proof of insurance is known as the Insurance $\qquad$ .

12 Which one of the following is the odd one out?
Answer

| Driving <br> Licence | Tax <br> Disc | Petrol <br> Receipt |
| :--- | :--- | :--- |

13 Hydrocarbons and carbon monoxide are two examples of
$\qquad$ .
$\qquad$
$\qquad$ is the term used to describe a
vehicle which is bought without trading another in.

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 $£$ $\qquad$ .

16 A casualty who looks pale, feels faint or dizzy and is very thirsty is likely to be suffering from $\qquad$ .

17 A $\qquad$ controls the temperature of water in a vehicle's cooling system.

18 The cylinder below is on the $\qquad$ stroke.


Fig. 18.1
© Motor Vehicle and Road Users Studies by Eamonn McPolin, published by Colourpoint Books, 2009. ISBN 9781906578312

19 The $\qquad$ allows one rear wheel to turn faster than the other when going round corners.

20 The component fitted to a vehicle's exhaust pipe to reduce noise is known as a $\qquad$ box.

## Section B

Answer all questions.

21 Why do tyres have a tread pattern?

22 Name one item which, by law, must be kept clean on a motor vehicle.

23 (a) Write down the legal limit for alcohol in:

1. breath $\qquad$ micrograms per 100 ml .
2. blood $\qquad$ milligrams per 100 ml .
(b) Write down two ways alcohol/drugs can affect a driver.
3. 
4. $\qquad$

24 Primary road signs have $\qquad$ lettering on a $\qquad$ background.

25 Apart from a helmet, name two articles of clothing which each of the following should wear.

$$
\text { Cyclist } \quad 1 .
$$

2. $\qquad$
3. $\qquad$

26 (a) Apart from the legal requirement, explain briefly why a motorist needs insurance.
$\qquad$
$\qquad$
(b) List three reasons why young, newly qualified, male drivers are a high insurance risk.

1. $\qquad$
2. $\qquad$
3. $\qquad$

27 Write down the meanings of the following initials:
ABS
SORN
PCV $\qquad$

28 (a) At night, when should a driver use his/her main beam?
$\qquad$
(b) When should a driver adjust the vehicle's headlights?
$\qquad$
$\qquad$

29 When do you think the part-time signals in Fig. 29.1 below would operate?
$\qquad$
$\qquad$


Fig. 29.1

30 Look at Fig. $\mathbf{3 0 . 1}$ below carefully.
Describe two hazards in the photograph.

1. $\qquad$
$\qquad$
2. $\qquad$
$\qquad$


Fig. 30.1
© John McMorrow / CCEA
$\square$

31 (a) Name three secondary safety features found on modern cars.

1. $\qquad$
$\qquad$
2. $\qquad$
$\qquad$
3. $\qquad$
$\qquad$
(b) Name two ways in which motor vehicle pollution has been reduced or discouraged.
4. $\qquad$
$\qquad$
5. $\qquad$
$\qquad$
(c) Look at Fig. 31.1 below carefully.

Apart from ramps, name one traffic calming feature you would expect to find here.

© John McMorrow / CCEA
Fig. 31.1

32 (a) A car costs $£ 15,300$. Calculate the monthly repayments over 36 months.
(b) The buyer decides to make a $20 \%$ deposit to buy the car, with repayments over 36 months. Calculate the monthly repayments.

Answer £
(c) Calculate the distance a vehicle would travel with a 15 gallon tank and
$\qquad$ miles [1]


#### Abstract

a fuel consumption of 55 mpg .


33 (a) Name the three actions you should complete on arrival at an accident scene, in order of priority.
1.
2.
3. $\qquad$
(b) At the scene of an accident, list two ways in which you could make a vehicle safe.
1.
2. $\qquad$

34 (a) Apart from the engine, suggest a source of the power for power steering.
$\qquad$
(b) Explain briefly a compression ratio of 12:1, in relation to combustion.
$\qquad$
$\qquad$
(c) List two reasons why regular maintenance checks are necessary on a motor vehicle.

1. $\qquad$
2. $\qquad$
(d) List two items which you should check weekly on your vehicle.
3. $\qquad$
4. 

35 Give the meaning of each of the road signs shown in Fig. 35.1-35.6 below, as stated in the Highway Code.


Fig. 35.1


Fig. 35.4


Fig. 35.2


Fig. 35.5
© Crown Copyright - Department for Transport
Fig. 35.3


Fig. 35.6
ent for Transport

Fig. 35.1
Fig. 35.2
Fig. 35.3
Fig. 35.4
Fig. 35.5 $\qquad$
Fig. 35.6

36 (a) Explain briefly why the two second rule is important to road safety.
$\qquad$
$\qquad$
(b) When should the two second rule be increased?
$\qquad$
$\qquad$

37 (a) Explain briefly the purpose of a vehicle's suspension system.
$\qquad$
$\qquad$
(b) Explain briefly the purpose of a valve spring.
$\qquad$
$\qquad$
(c) Apart from causing the car to stop, why is it important to make sure that a car's fuel tank is never completely emptied?
$\qquad$
$\qquad$

38 (a) What is a blind spot?
$\qquad$
$\qquad$
(b) Where should a pedestrian walk, on a country road without a footpath?
$\qquad$
(c) Driving on rural roads can be dangerous. Write down two dangers.
1.
2. $\qquad$


Fig. 39.1
© Motor Vehicle and Road Users Studies by Eamonn McPolin, published by Colourpoint Books, 2009. ISBN 9781906578312
(a) Name the parts marked 1 to 3 in Fig. 39.1 above.
1.
2.
3. $\qquad$
(b) Explain briefly how linear motion is changed into circular motion in a
$\qquad$
$\qquad$
$\qquad$
.

## car engine.

(c)


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

Name the parts marked 1 and 2 in Fig. 39.2 above.
1.
2.
(d) Explain briefly the function of a clutch.
$\qquad$
$\qquad$
(e) On which side of the clutch in Fig. 39.2 would you expect to find the engine? Answer A or B
$\qquad$

40 (a) Apart from resting the night before, list two ways you could prepare for a long car journey.
1.
2.
(b) Apart from checking fuel, list two ways you could prepare your vehicle for a long journey.
1.
2.
(c) Write down one reason why speed limits are lower on single carriageway roads rather than on dual carriageways or motorways.
$\qquad$

41 (a) The maximum speed limit on a motorway is $\qquad$ mph.
(b) Name the approach road used when joining a motorway.
$\qquad$
(c) What must you do if you have missed your exit on the motorway?
$\qquad$
(d) Name two vehicles restricted from using the third, outside lane of a motorway.

1. $\qquad$
2. $\qquad$

42 Apart from overtaking, name two occasions when a driver would use MSM on a motorway.
1.
2.

43 Describe briefly what you should do if your vehicle breaks down on a motorway.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

44 Safe driving involves observation, courtesy and anticipation. Explain briefly how you can do this, using the headings below.

Observation
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
Courtesy
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
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$\qquad$

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