Rewarding Learning
General Certificate of Secondary Education
2009

## Motor Vehicle and Road User Studies

Paper 1<br>Foundation Tier

[G6802]

## MONDAY 11 MAY, 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 fifty-two questions.
Section A - Answer all twenty questions. Record your answers by marking the appropriate letter on the answer sheet provided. Use only the spaces numbered 1 to 20. Keep in sequence when answering.

Section B - Answer all thirty-two questions. Write your answers in the spaces provided in this question paper.
You are provided with an insert for use with Questions 44 and 48 in this paper.
Do not write your answers on this insert.

## INFORMATION FOR CANDIDATES

The total mark for this paper is 120 .
Quality of written communication will be assessed in Questions 51 and 52.
In Section A, all questions carry equal marks, i.e. one mark for each question.
In Section B, the 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 25 minutes on Section A and 65 minutes on Section B.
You may use an electronic calculator.

| For Examiner's <br> use only |  |
| :---: | :---: |
| Question <br> Number | Marks |
| $1-20$ |  |
| 21 |  |
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| 51 |  |
| Total |  |
| Marks |  |
|  |  |
| 22 |  |
| 23 |  |

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## Section A

You must answer all twenty questions.
Each of the questions or incomplete statements in this section is followed by five possible answers A, B, C, D and E. Choose the best answer for each question. Do this by putting a thick pencil line through the correct letter in the boxes provided on your answer sheet. You should spend approximately $\mathbf{2 5}$ minutes on this section.

1 The maximum speed limit for a large goods vehicle on a dual carriageway in mph is
A 30 .

B 40 .

C 50 .

D 60 .

E 70.

2 Which of the following statements about alcohol is false?
A It is addictive.

B It can impair vision.
C It slows reactions.

D It is a depressant.
E It is a stimulant.

3 The legal driving limit for alcohol in breath is
A $\quad 25 \mu \mathrm{~g} / 100 \mathrm{ml}$.

B $\quad 30 \mu \mathrm{~g} / 100 \mathrm{ml}$.
C $\quad 35 \mu \mathrm{~g} / 100 \mathrm{ml}$.
D $\quad 40 \mu \mathrm{~g} / 100 \mathrm{ml}$.
E $\quad 45 \mu \mathrm{~g} / 100 \mathrm{ml}$.

4 A continuous double white line along the centre of a road means
A do not cross these lines.
B do not overtake.

C dangerous bend.
D overtake with caution.
E junction ahead.

5 Road signs giving negative instructions are usually
A circular with a red insert.
B circular with a red border.
C triangular with a red border.
D triangular with a blue border.
E rectangular with a blue insert.

6 Which one of the following is not a factor in determining a driver's reaction time?
A old age
B age of vehicle
C alcohol

D tiredness
E anxiety

7 A flashing green man at a pelican crossing means a motorist must
A stop.
B prepare to go.
C go.
D go if the crossing is clear.
E wait until the light turns green.

8 Which one of the following is not recommended in the fog code?
A reduce speed.
B use dipped headlights.
C follow someone else's tail lights.
D allow more time for your journey.
E use rear fog lamps/lights.

9 The amount the insured has to pay before the insurance company makes payment in any claim is

A indemnity.
B excess.
C personal liability.
D premium.
E knock for knock.

10 Which of the following liabilities is not included in Third Party insurance cover?
A injury to passengers
B accidents caused by passengers
C damage caused by fire
D injuries to other people
E damage to other people's property caused by the insured vehicle

11 The only fluid level required by law to be maintained in a motor vehicle is
A oil.
B brake fluid.
C power steering fluid.
D water in radiator.
E water in windscreen washer.

12 The vehicle test (MOT) tests which one of the following?
A engine oil viscosity
B strength of anti-freeze in the cooling system
C acid level in the battery
D condition of in-line fuses
E exhaust gas emissions

13 A car travelling at 55 mph will cover a distance of 165 miles in
A $\frac{1}{2}$ hour.
B 1 hour.
C $\quad 1 \frac{1}{2}$ hours.
D 2 hours.

E 3 hours.

14 On a journey of 100 miles, how many gallons of petrol are used by a car with a fuel consumption of 40 mpg ?

A $\frac{1}{2}$
B $\quad 1 \frac{1}{2}$
C 2
D $2 \frac{1}{2}$
E 3

15 The first priority on arrival at the scene of a serious traffic accident would be to
A send for the emergency services.
B look for help.
C protect the accident scene.
D secure the vehicles.

E check for injuries.

16 In a four-stroke engine, if both valves are closed and the piston is rising, the engine is on the
A power stroke.
B induction stroke.

C exhaust stroke.
D transfer stroke.

E compression stroke.

17 The connecting rod connects the
A big ends to the crankshaft.

B pistons to the crankshaft.
C cylinder head to the cylinder block.
D sump to the cylinder block.
E crankshaft to the flywheel.

18 In which of the following systems would you find the differential?
A transmission

B electrical
C braking
D suspension

E exhaust

19 Most cars have batteries which produce 12 volts. To create a suitable spark at the spark plug this must be boosted to approximately

A 30 volts.

B 300 volts.
C 3000 volts.

D 30000 volts.
E $\quad 300000$ volts.

20 Which one of the following allows one rear wheel to turn faster than the other, when cornering?

A universal joints
B back axle
C differential
D distributor
E big end

## Section B

## You must answer all thirty-two questions.

You should spend approximately $\mathbf{6 5}$ minutes on this section.

21 Where would you expect to find this sign?

## Keep in

low gear

Fig. 21.1
$\qquad$
22 Name one disadvantage of a jet style helmet.

23 What is the name given to a temporary insurance certificate?
$\qquad$

24 Explain briefly why vehicles now have an emissions tax.
$\qquad$
$\qquad$
$\qquad$


25 When might high-sided vehicles have to drive in the middle of the road?

26 There are many reasons why you should not drive when tired. Name two.

1. $\qquad$
2. 

27 Describe briefly the main difference between a single track road and a single carriageway.
$\qquad$
$\qquad$

28 Describe how to check the pressure of a tyre you suspect to be under inflated, if all the tyres are warm.
$\qquad$
$\qquad$

29 Why would a driver need to complete a SORN (Statutory Off Road Notification) document?
$\qquad$
$\qquad$

30 Explain briefly why lead was removed from petrol.

31 Calculate the distance to the next junction if, driving at 60 mph , it will take 22 minutes to get there.
$\qquad$ miles [1]

32 (a) Apart from engine oil and coolant, name three engine fluid levels you

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

(b) Explain briefly why the cooling system has a water pump.
$\qquad$
$\qquad$

33 Apart from being wet, list two road surface conditions which could be hazardous for the motorcyclist.

1. $\qquad$
2. 

## could check on a motor vehicle.

都

34 (a) Name two vehicles which are prohibited from using the third (outside) lane of a motorway.
(b) List two vehicles not permitted on a motorway.

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

35 (a) Name three legal requirements when owning and running a motor vehicle.

1. $\qquad$
2. $\qquad$
3. $\qquad$
(b) Apart from the registration number, name two items of information found on a vehicle's tax disc.
4. $\qquad$
5. 

36 List four ways in which road engineers can improve the safety of roads.

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

37 In which country would you find an autostrada?

38 List two advantages and two disadvantages of using a car and a motorcycle as a means of transport.

Car advantage
Disadvantage
Motorcycle advantage
Disadvantage

39 (a) List two ways you could reduce the cost of motoring.
1.
2.
(b) Calculate the average speed of a vehicle which travelled 105 miles in $2 \frac{1}{2}$ hours.

40 (a) Name three services you could ask for after coming across the scene of an accident.
1.
2. $\qquad$
3.
(b) Name two ways in which a vehicle can be made secure at an accident scene.

1. $\qquad$
2. 

.

41 What is the order of priorities in First Aid known as BBC ?
B $\qquad$

B $\qquad$
C $\qquad$

42 (a) Describe briefly the function of a universal joint.
$\qquad$
$\qquad$


The Car by E.F. Scott and B. Toby, published by Longman, 1978, ISBN 058222005X. © Pearson Education Ltd, publishers.
Fig. 42.1
(b) Fig. 42.1 shows a car's charging system.

Identify the parts marked (i)-(iv).
(i)
(ii)
(iii)
(iv) $\qquad$ [1] [1] [1]

43 (a) Describe briefly the action of drum and disc brakes.
Drum brakes $\qquad$
$\qquad$
Disc brakes $\qquad$
$\qquad$
(b) Describe the main advantage of having ABS fitted.
$\qquad$
$\qquad$

44 Study the road signs on the insert sheet.
State the meaning of each of the road signs Fig. 44.1-44.4.
Fig. 44.1
Fig. 44.2
Fig. 44.3
Fig. 44.4

45 Explain the meaning of the following terms. bhp

LGV
RTA
mpg
$\qquad$都

46 (a) What is the purpose of the lifesaver check?
(b) Outline briefly two occasions when you should use a lifesaver check.
$\qquad$
$\qquad$
$\qquad$

47 Name two ways in which information about speed limits can be given to the

1. $\qquad$
2. 


#### Abstract

driver.


$\qquad$

48 Study the photographs Fig. 48.1-48.3 on the insert sheet.
(a) State two dangers in Fig. 48.1

1. $\qquad$
2. 

(b) Fig. 48.2

Give two reasons why car sharing is being encouraged because of the construction work on the nearby Westlink in Belfast.

1. $\qquad$
2. $\qquad$
(c) Fig. 48.3

State two difficulties a driver could face in this weather.

1. $\qquad$
2. 

49 Name two examples of an "appropriate child restraint".

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

50 Describe two situations when motor vehicles must give way to pedestrians.

1. $\qquad$
2. 

$\qquad$
(b)
.

51 (a) Name two actions which could identify you as a courteous driver.

1. $\qquad$
2. 

(b) Explain briefly how being a courteous driver can make you a safer road user.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
(b) Explain briefly how being a courteous driver can make you a safer road

52 Young drivers between the age of 17-21 years are at the highest risk of accidents. Explain why this is the case and describe what young drivers could do to reduce the risks.
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## THIS IS THE END OF THE QUESTION PAPER

## GCSE Motor Vehicle and Road User Studies 2009

## Paper 1

Foundation Tier
[G6802]
For use with Question 44


Fig. 44.1


Fig. 44.2


Fig. 44.3


Fig. 44.4
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## For use with Question 48



Fig. 48.1


Fig. 48.2


Fig. 48.3

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