



General Certificate of Secondary Education
2011

Motor Vehicle and Road User Studies

Unit 1: Motor Vehicle and Road User Theory

Higher Tier

[GMV12]

THURSDAY 19 MAY, MORNING

**MARK
SCHEME**

			AVAILABLE MARKS
1	Low winter sun, glare, etc.	[1]	1
2	Piston, connecting rod.	[2]	2
3	(a) Pelican crossing is light controlled.	[1]	
	(b) Any two from: Tactile paving, flashing green man, beeper, push button control.	[2]	3
4	Police, ambulance.	[1]	1
5	When using a rear facing baby seat.	[1]	1
6	(a) Any two from: Reduces the number of cars in the city, increases the use of public transport, reduces pollution, reduces accidents, etc.	[2]	
	(b) Any two from: Saves money on car parking fees, less wear and tear on vehicles, less congestion on roads, etc.	[2]	4
7	Any two from: Licence, tax, insurance, depreciation, MOT.	[2]	2
8	(a) Cover for everything with comprehensive insurance.	[1]	
	(b) The person buying insurance.	[1]	2
9	MOT – Ministry of Transport. PSV – Public Service Vehicle. PCV – Passenger Carrying Vehicle.	[3]	3
10	1. c	[1]	
	2. d	[1]	
	3. e	[1]	
	4. a	[1]	
	5. b	[1]	5

		AVAILABLE MARKS
11 (a)	20 miles.	[1]
(b)	Speed = $69 \div 3 \times 2 = 46$ mph.	[1]
12	Any two from: Men working, obstacles on road, single carriageway, on coming vehicles, etc.	[2]
13 (a)	Wide, long, dangerous load, explosives, VIP.	[1]
(b)	No junctions, u-turns and roundabouts, etc.	[3]
(c)	Changing lanes, overtaking.	[1]
14 (a)	Any two from: Hard shoulder, pedestrian crossing, zig zag lines, 15 metres from a junction, a clearway, a road marked with double white lines, a bus stop/lane, a cycle track, etc.	[2]
(b)	Fog, falling snow, heavy rain, etc.	[2]
15	Treat it like an unmarked junction and proceed with care.	[2]
16 (a)	Buying a vehicle without a trade in.	[2]
(b)	Annual Percentage Rate – how much interest will be charged each year.	[2]
(c)	Guarantee for set period of time, to repair mechanical parts.	[2]
17	Any two from: Penalty points for non-wearing of seat belts, using mobile phones, retraining courses for drink/driving offences, MOT disc to be displayed, etc.	[2]
18	Any three from: Avoid unnecessary trips, avoid sudden braking/acceleration, only use air conditioning if necessary, keep tyres at correct pressure, use highest possible gear, etc.	[3]

			AVAILABLE MARKS
19 (a)	Any three from: Stop, keep vehicle stationary, inform relevant people, etc.	[3]	
(b)	Any two from: Protect scene, report to police, make an insurance claim, etc.	[2]	5
20 (a)	Surface may be slippery.	[1]	
(b)	Animals on the road etc.	[1]	2
21 (a)	Joe.	[1]	
(b)	Joe.	[1]	
(c)	Joe.	[1]	
(d)	Sarah.	[1]	4
22 Fig. 22.1	(Solo) motorcycle parking.	[1]	
Fig. 22.2	Level crossing with gate or barrier.	[1]	
Fig. 22.3	Cattle/cows.	[1]	
Fig. 22.4	One way traffic.	[1]	
Fig. 22.5	No cycling.	[1]	
Fig. 22.6	Give way.	[1]	6
23 (a)	1. Stop/direct traffic. 2. Park vehicle safely. 3. Warn other vehicles/warning triangle.	[3]	
(b)	B. Breathing. B. Bleeding. C. Consciousness.	[3]	6

			AVAILABLE MARKS
24 (a)	In a street with high density housing.	[1]	2
(b)	To reduce accidents/encourage more care on the roads.	[1]	
25 (a)	4 years.		9
	3 years.	[2]	
(b)	Any two from: MOT centre to home, home to garage for repairs, to MOT centre for retest.	[2]	
(c)	Any four from: Lights, horn, wipers, brakes, suspension, tyres, seat belts, etc.	[4]	
(d)	To make sure vehicle is kept in a safe condition.	[1]	
26 (a) (i)	High tension lead connection.	[1]	
	(ii) Central electrode.	[1]	
	(iii) Ceramic insulator.	[1]	
	(iv) Metal casing.	[1]	
	(v) Threads to screw into cylinder.	[1]	
	(vi) Earth electrode.	[1]	
(b)	To create a spark to ignite the fuel.	[2]	12
(c)	12,000–30,000 volts.	[1]	
(d)	The coil.	[1]	
(e)	Remove from cylinder, check for cracks in insulator, check condition of electrode, check spark gap.	[2]	
27 Fig. 27.1	Oil level.	[1]	
Fig. 27.2	Battery/charging system.	[1]	4
Fig. 27.3	Engine management.	[1]	
Fig. 27.4	Headlight main beam.	[1]	

28 Types of transport: car, motorcycle, bus, train, air, etc.

Car:

Advantages:

Convenience, good weather protection, passenger comfort, designed to protect, etc.

Disadvantages:

Expensive to purchase/run, cannot drive until 17, parking difficulty, maintenance, body corrosion, etc.

Motorcycle:

Advantages:

Cheaper to purchase/run, easy to park, can use from 16, easy to manoeuvre in traffic, etc.

Disadvantages:

Special clothing, poor protection, high accident rate, only carries 1/2 people, exposed to weather and vandals, etc.

Bus:

Advantages:

Plenty of passenger room, relaxing, no parking worries, good for environment, safer, etc.

Disadvantages:

Restricted timetable, getting to and from bus stop, can be crowded, cost per journey, etc.

Train:

Advantages:

Plenty of room, can get up to stretch legs, no parking problems, avoids traffic, safe, etc.

Disadvantages:

Restricted timetable, cost per ride, getting to and from station, etc.

[1] each for two correct types [2] each for advantages and disadvantages.

10

- 29 (a) (i)** Disc callipers. [1]
- (ii)** Disc pads. [1]
- (iii)** Brake disc. [1]

			AVAILABLE MARKS
	(b) Master cylinder: draws fluid from reservoir, forces fluid through pipelines to each wheel.	[2]	
	Slave/wheel cylinder: one in each wheel to force brake fluid to move brake shoes.	[2]	
	Brake pipes: to carry the fluid from the master cylinder to each wheel.	[2]	
	(c) ABS: Each wheel has a sensor to detect locking brake, a pumping action releases and reapplies the brake.	[2]	11
30	(a) The reduction in value of a vehicle because of age.	[2]	
	(b) Any three from: Cleaning, parking, fees for AA/RAC, fines, clothing, etc.	[3]	5
31	(a) Any three from: On a corner, brow of a hill, at a junction where lines on road indicate not to, at a pedestrian crossing, etc.	[3]	
	(b) Any correct explanation.	[2]	
	(c) It could cause driver overtaking to run out of space.	[2]	
	(d) Try and find somewhere to pull in and let other driver past.	[2]	
	(e) In a one way street, when overtaking, when turning right, etc.	[2]	11
32	(a) Road conditions: Smooth surface, poor drainage, etc.		
	Weather conditions: Heavy rain, persistent rain, etc.	[4]	
	(b) Make sure tyres are in good condition.	[2]	
	(c) Take foot off accelerator, don't brake, try and reduce speed, etc.	[1]	7

33 Mark in levels

Indicative content:

Primary safety

- better tyres/brakes/ABS
- heater/air con for comfort
- electric windows, door mirrors, seats.

Driver

- improved training, IAM, etc.
- any positive behaviour/observation, etc.

[0] A zero mark will be awarded if the response is not worthy of credit.

Level 1 ([1]–[4])

The candidate may focus only on one or two of the required references and contain limited or irrelevant detail. Specialist vocabulary will be limited or inappropriately used. The answer may lack clarity and/or cohesion and may also contain significant grammatical, punctuation or spelling errors.

Level 2 ([5]–[8])

The candidate addresses at least two of the required references in some relevant detail. Specialist vocabulary is correctly used. The style of writing is appropriate and the meaning is clear although there may be some errors in spelling, punctuation or grammar.

Level 3 ([9]–[12])

The candidate addresses all three of the required references in line with the detail set out above. Specialist vocabulary is used correctly. The answer is well structured and relevant material is presented with a high degree of clarity and coherence. Spelling, punctuation and grammar will generally be correct.

12

34 Mark in levels

Indicative content:

Expected advantages

- slows traffic
- reduces accident risk
- safer for pedestrians.

Other examples of traffic management

Candidates will mention **two** from:

- speed bumps
- pinch points
- traffic islands
- roundabouts
- traffic lights
- box-junctions
- gateways, etc.

and describe where each is suited.

[0] A zero mark will be awarded if the response is not worthy of credit.

Level 1 ([1]–[4])

The candidate may focus only on one or two of the required references and contain limited or irrelevant detail. Specialist vocabulary will be limited or inappropriately used. The answer may lack clarity and/or cohesion and may also contain significant grammatical, punctuation or spelling errors.

Level 2 ([5]–[8])

The candidate addresses at least two of the required references in some relevant detail. Specialist vocabulary is correctly used. The style of writing is appropriate and the meaning is clear although there may be some errors in spelling, punctuation or grammar.

Level 3 ([9]–[12])

The candidate addresses all three of the required references in line with the detail set out above. Specialist vocabulary is used correctly. The answer is well structured and relevant material is presented with a high degree of clarity and coherence. Spelling, punctuation and grammar will generally be correct.

35 Mark in levels

Indicative content:

Bodies responsible

- DoE Road Safety Branch
- RoSPA
- police
- road safety committees
- schools
- youth groups.

Methods

- advertising
- Internet
- books and leaflets
- media.

[0] A zero mark will be awarded if the response is not worthy of credit.

Level 1 ([1]–[4])

The candidate may focus only on one or two of the required references and contain limited or irrelevant detail. Specialist vocabulary will be limited or inappropriately used. The answer may lack clarity and/or cohesion and may also contain significant grammatical, punctuation or spelling errors.

12

Level 2 ([5]–[8])

The candidate addresses at least two of the required references in some relevant detail. Specialist vocabulary is correctly used. The style of writing is appropriate and the meaning is clear although there may be some errors in spelling, punctuation or grammar.

Level 3 ([9]–[12])

The candidate addresses all three of the required references in line with the detail set out above. Specialist vocabulary is used correctly. The answer is well structured and relevant material is presented with a high degree of clarity and coherence. Spelling, punctuation and grammar will generally be correct.

TotalAVAILABLE
MARKS

12

180