



Rewarding Learning

General Certificate of Secondary Education
2017

Motor Vehicle and Road User Studies

Unit 1: Motor Vehicle and Road User Theory

Higher Tier

[GMV12]

MONDAY 15 MAY, AFTERNOON

**MARK
SCHEME**

General Marking Instructions

Introduction

Mark schemes are published to assist teachers and students in their preparation for examinations. Through the mark schemes teachers and students will be able to see what examiners are looking for in response to questions and exactly where the marks have been awarded. The publishing of the mark schemes may help to show that examiners are not concerned about finding out what a student does not know but rather with rewarding students for what they do know.

The Purpose of Mark Schemes

Examination papers are set and revised by teams of examiners and revisers appointed by the Council. The teams of examiners and revisers include experienced teachers who are familiar with the level and standards expected of students in schools and colleges.

The job of the examiners is to set the questions and the mark schemes; and the job of the revisers is to review the questions and mark schemes commenting on a large range of issues about which they must be satisfied before the question papers and mark schemes are finalised.

The questions and the mark schemes are developed in association with each other so that the issues of differentiation and positive achievement can be addressed right from the start. Mark schemes, therefore, are regarded as part of an integral process which begins with the setting of questions and ends with the marking of the examination.

The main purpose of the mark scheme is to provide a uniform basis for the marking process so that all the markers are following exactly the same instructions and making the same judgements in so far as this is possible. Before marking begins a standardising meeting is held where all the markers are briefed using the mark scheme and samples of the students' work in the form of scripts. Consideration is also given at this stage to any comments on the operational papers received from teachers and their organisations. During this meeting, and up to and including the end of the marking, there is provision for amendments to be made to the mark scheme. What is published represents this final form of the mark scheme.

It is important to recognise that in some cases there may well be other correct responses which are equally acceptable to those published: the mark scheme can only cover those responses which emerged in the examination. There may also be instances where certain judgements may have to be left to the experience of the examiner, for example, where there is no absolute correct response – all teachers will be familiar with making such judgements.

			AVAILABLE MARKS
1	An alternative or less direct route	[1]	1
2	Fear of spinal injury or damage to neck, danger of causing further injury	[1]	1
3	DVLA/DVA/DVLNI.	[1]	1
4	Any two from: have to ensure both carriageways are clear, have to cross lanes of traffic, may be unable to wait in centre reservation, fast moving traffic	[2]	2
5	Any two from: no harsh acceleration or braking, no doughnuts, burning rubber or spinning wheels, no fast cornering	[2]	2
6	(a) Only enter box when your exit is clear.	[1]	
	(b) Allows easy access to and from premises/shops	[1]	
	(c) Low volume of traffic from side road	[1]	
	(d) Any three from: narrow carriageway on one side, men working, pavement screened off, visibility obstructed	[3]	6
7	(a) Any two from: have a good sleep, wear suitable clothing, plan journey and breaks, eat before leaving, avoid alcohol. Accept valid alternatives	[2]	
	(b) Any two from: fuel/fluids for vehicle, check tyres, clean windscreen front/rear, clean number plates and lights, check mirror adjustment. Accept valid alternatives	[2]	
	(c) Any two from: take frequent breaks, drink coffee, get fresh air/open a window, reduce heat in car, switch on radio, check seat position. Accept valid alternatives	[2]	6

			AVAILABLE MARKS	
8	(a)	Any two from: engine size, maximum speed, rarity, price, BHP, make/model, security, modifications	[2]	5
	(b)	Any two from: age, inexperience, gender, driving record, address	[2]	
	(c)	reduction in premium because of no claims record	[1]	
9	(a)	Tread depth, foreign bodies, side wall damage, pressure	[3]	4
	(b)	Tread depth indicator	[1]	
10	(a)	To ensure vehicles are road worthy and mechanically sound.	[1]	5
	(b)	1. 4yrs [1] 2. 3yrs [1]	[2]	
	(c)	to or from a test centre, to or from a garage for repairs	[2]	
11	(a)	Insurance certificate, Driving licence	[2]	4
	(b)	Supervising driver's licence	[2]	
12	(a)	Walk in single file, face oncoming traffic/keep close to right hand side of road.	[2]	4
	(b)	Any two from: zebra crossing, light controlled crossing, pedestrian bridge, where you can see traffic coming both ways, pedestrian/pelican/toucan crossing	[2]	
13	(a)	Fig. 13.1 stop or give way [1] Fig. 13.2 roundabout [1] Fig. 13.3 no vehicles [1] Fig. 13.4 soft verges [1] Fig. 13.5 no U-turns [1] Fig. 13.6 no overtaking [1]	[6]	8
	(b)	approximately 100 yards	[1]	
	(c)	low bridge	[1]	

		AVAILABLE MARKS
14 (a)	Dangers (any two) opposite a junction, opposite a lane/entrance on a bend	[2]
	Reasons (any two) have to cross into opposite lane; on-coming traffic, forward vision blocked; vehicles pulling out of junction; difficulty turning right.	[2]
(b)	Any four from: pedestrians have to cross busy road; little room for bus to pull in; low wall behind pedestrians; near bend/brow of hill; dangerous for motorists overtaking parked bus.	[4]
15 (a)	Italy	[1]
(b)	Germany	[1]
(c)	Any two from: cleaner fuel, no lead in petrol, catalytic converter, engines designed to use smaller amounts of fuel, MOT emissions test	[2]
(d)	Any one from: A person should walk at least 60 yds in front of the vehicle, carry a red flag to warn riders and drivers of horses, set a speed limit of 4 mph in the country and 2 mph in a city, town or village.	[1]
16 (a)	Any two from: destruction of valued landscapes, wildlife habitats and reserves, loss of agricultural land, increased traffic/noise, loss of business. Accept valid alternatives	[2]
(b)	Any two from: planting trees and vegetation; erection of suitable fencing/screening; cutting or lowering of roads; constructing or replacing natural features; building tunnels or underpasses. Accept valid alternatives	[2]
17 (a)	Petrol 4.8; Oil 0.2	[2]
(b)	1. 35	[1]
	2. 80	[1]
	3. 107	[1]
		8
		5
		4
		5

			AVAILABLE MARKS
18 (a)	1 day = £30 3 days = £90 W/end special £75 Difference 90-75 = 15	Ans £15	[2]
(b)	$6 \times 20 = 120$ $7 \times 17.50 = 122.50$ $122.50 - 120.00 = 2.50$	Ans £2.50	[2]
(c) A	deposit £532.00 $36 \times £275 =$ £9,900.00 Total cost = £10,432.00		
B	$36 \times £180 =$ £6,480.00 Final payment = £5,000.00 Total cost = £11,480.00		
	Difference £11,480.00 – £10,432.00 = £1,048 Answer £1,048		[2]
(d)	1. Annual Percentage rate [1] 2. Or near(est) offer [1] 3. Hire Purchase [1]		[3] 9
19 (a)	3hr 54mins		[1]
(b)	1hr 18mins		[1]
(c)	$200/50 = 4$ $£3.50 \times 4 = £14.00$		[2] 4
20 (a)	Any two from: report to police within 24 hours, contact the emergency services, give your details to people who reasonably require them, stop and remain at scene		[3]
(b)	Place in recovery position.		[1]
(c)	casualty not breathing		[1]
(d)	1. Protect the scene [1] 2. Call the emergency services [1] 3. Make vehicles safe [1] 4. Attend to casualties [1]		[4] 9

		AVAILABLE MARKS
21 (a)	Any two from: wear reflective/luminous/fluorescent clothing; use cycle lanes, if available; use lights front and rear; wear a helmet	[2]
(b)	Any four from: encourages cycling; promotes safety, separates cyclists from traffic; promotes a healthy lifestyle; motorists don't get frustrated with cyclists environmentally friendly/less harmful emissions; takes less room than a vehicle	[4]
(c)	Any three from: carry a passenger; hold onto a moving vehicle; ride using one hand on the handlebar; ride using alcohol or drugs; ride on pavements; ride between lanes of traffic; ride more than two abreast	[3]
22 (a)	1 – C [1] 2 – B [1] 3 – D [1] 4 – A [1]	[4]
(b)	1 induction [1] 2 power [1]	[2]
(c)	1. Inlet [1] 2. Exhaust [1] 3. Transfer [1]	[3]
(d)	1. Induction [1] 2. Power [1] 3. Transfer [1]	[3]
		9
		12

		AVAILABLE MARKS
23 (a)	Disc brake	[1]
(b)	1. brake calliper [1] 2. brake pads [1] 3. brake disc [1]	[3]
(c)	brake fluid	[1]
(d)	the brake fluid attracts moisture and over time makes the action of the brake feel spongy.	[1]
(e)	Drum brake	[1]
(f)	1. Brake pad/lining [1] 2. Brake drum [1] 3. Brake shoes [1]	[3]
(g)	To hold the vehicle stationary	[2]
		12
24 (a)	1. Steering column [1] 2. pinion [1] 3. rack [1]	[3]
(b)	Power assisted steering	[1]
(c)	Makes steering lighter, makes manoeuvres easier	[2]
(d)	1. thermostat [1] 2. radiator/pressure cap [1] 3. water pump [1] 4. water jacket [1]	[4]
(e)	to prevent expansion caused by overheating	[1]
(f)	air cooling	[1]
		12
25	Answers should include items of secondary safety, for example: seat belts/pretensioners, air bags/curtain airbags, safety glass, soft facia, anti-burst locks, crumple zones, head restraints, recessed door handles/window winders, collapsible steering columns. Accept valid alternatives Any three features plus explanation 2 marks each	[6]
		6

26 Drivers:

Scanning the road front and rear, reading the road ahead, observing road signs and traffic lights, observing pedestrians and watching for changes of direction, watch carefully when passing close to parked cars, obey speed limits, avoid using mobile devices.

Accept valid alternatives

Pedestrians:

Cross road only at safe places, careful crossing between parked cars, use Green Cross Code, don't use mobile devices while walking, avoid alcohol and drugs, use footpath.

Accept valid alternatives

[12]

12

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

Level 1 ([1]–[4])

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

Level 2 ([5]–[8])

The candidate will address at least two of the required references in some relevant detail. Some specialist vocabulary is used and used correctly. The style of writing is appropriate and the meaning is clear. There may be some errors in spelling, punctuation or grammar.

Level 3 ([9]–[12])

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

AVAILABLE
MARKS

27 Hazards:

Parked cars, pedestrians, dogs, children playing, ice-cream vans.

Precautions:

Take extra care, slow down, expect the unexpected, minimise internal distractions, be prepared to stop, anticipate, be alert, allow extra time for journey.

Engineering:

Any traffic calming measure, speed limits, signs, pedestrian crossings. [12]

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

Level 1 ([1]–[4])

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

Level 2 ([5]–[8])

The candidate will address at least two of the required references in some relevant detail. Some specialist vocabulary is used and used correctly. The style of writing is appropriate and the meaning is clear. There may be some errors in spelling, punctuation or grammar.

Level 3 ([9]–[12])

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

AVAILABLE MARKS
12

28 Stopping:

Braking and stopping distances increased, 2 second rule increased, reduced speed, good tyres, grip, avoid harsh braking.

Seeing:

Lights working, fog lights, de-mister, de-icer, wipers, windscreen washer, put windows down, sun glasses, sun visor.

Being Seen:

Use of appropriate lighting (fog, dipped, full beam, hazard, reversing, parking), flashing, road position, use of horn.

[12]

12

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

Level 1 ([1]–[4])

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

Level 2 ([5]–[8])

The candidate will address at least two of the required references in some relevant detail. Some specialist vocabulary is used and used correctly. The style of writing is appropriate and the meaning is clear. There may be some errors in spelling, punctuation or grammar.

Level 3 ([9]–[12])

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

Total**180**