

New  
Specification



General Certificate of Secondary Education  
2019

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## Motor Vehicle and Road User Studies

Unit 1: Motor Vehicle and  
Road User Theory

[GMR11]

WEDNESDAY 8 MAY, AFTERNOON

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**MARK  
SCHEME**

## General Marking Instructions

### **Introduction**

The main purpose of a mark scheme is to ensure that examinations are marked accurately, consistently and fairly. The mark scheme provides examiners with an indication of the nature and range of candidates' responses likely to be worthy of credit. It also sets out the criteria which they should apply in allocating marks to candidates' responses.

### **Assessment objectives**

Below are the assessment objectives for Motor Vehicle and Road User Studies.

Candidates should be able to:

- AO1** Recall, select and communicate their knowledge and understanding in relation to motor vehicle and road user studies;
- AO2** analyse, evaluate and draw logical conclusions from motor vehicle and road user information;
- AO3** collect, select and use road traffic information from a variety of sources; and
- AO4** demonstrate skills of vehicle (moped) control and roadcraft.

### **Quality of candidates' responses**

In marking the examination papers, examiners should be looking for a quality of response reflecting the level of maturity which may reasonably be expected of a 15–16 year old which is the age at which the majority of candidates sit their GCSE examinations.

### **Flexibility in marking**

Mark schemes are not intended to be totally prescriptive. No mark scheme can cover all the responses which candidates may produce. In the event of unanticipated answers, examiners are expected to use their professional judgement to assess the validity of answers. If an answer is particularly problematic, then examiners should seek the guidance of the supervising examiner.

### **Positive Marking**

Examiners are encouraged to be positive in their marking, giving appropriate credit for what candidates know, understand and can do rather than penalising candidates for errors or omissions. Examiners should make use of the whole of the available mark range for any particular question and be prepared to award full marks for a response which is as good as might be expected of a 15 or 16-year-old GCSE candidate.

### **Types of Mark Scheme**

Mark schemes for tasks or questions which require candidates to respond in extended written form are marked on the basis of levels of response which take account of the quality of written communication.

Other questions which require only short answers are marked on a point for point basis with marks awarded for each valid piece of information provided.

### **Awarding zero marks**

Marks should only be awarded for valid responses and no marks should be awarded for an answer which is completely incorrect or inappropriate.

**Levels of response**

In deciding which level of response to award, examiners should look for the 'best fit' bearing in mind that weakness in one area may be compensated for by strength in another. In deciding which mark within a particular level to award to any response, examiners are expected to use their professional judgement.

The following guidance is provided to assist examiners:

- **Threshold performance:** Response which just merits inclusion in the level and should be awarded a mark at or near the bottom of the range.
- **Intermediate performance:** Response which clearly merits inclusion in the level and should be awarded a mark at or near the middle of the range.
- **High performance:** Response which fully satisfies the level description and should be awarded a mark at or near the top of the range.

**Marking Calculations**

In marking answers involving calculations, examiners should apply the 'own figure rule' so that candidates are not penalised more than once for a computational error.

**Quality of written communication**

Quality of written communication is taken into account in assessing candidates' responses to all tasks and questions that require them to respond in extended written form. These tasks and questions are marked on the basis of levels of response. The description for each level of response includes reference to the quality of written communication.

**Level 1:** 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:** Specialist vocabulary is mainly 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:** 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.



## Vehicle Control and Road User Behaviour

			AVAILABLE MARKS
21	Junction number/exit number	[1]	1
22	uphill	[1]	1
23	18 tonne maximum gross weight	[1]	1
24	Check that both carriageways are clear before pulling out	[1]	1
25	(a) dirt on the road, wet road	[2]	
	(b) Any <b>one</b> from: loss of control, steering becomes light	[1]	3
26	Any <b>three</b> from: slow down, listen for traffic, dipped headlights, foglights, don't follow lights of car in front, keep a safe distance from the vehicle in front, use wipers and keep window clear, leave plenty of time for journey	[3]	3
27	(a) cat's eyes	[1]	
	(b) helps drivers identify road position at night	[1]	
	(c) an extra lane on hills to allow slow moving vehicles to be overtaken	[1]	
	(d) features force motorists to reduce speed	[1]	4
28	(a) Any <b>three</b> from: pedestrians, horse riders, cyclists, holders of provisional licences and drivers of agricultural vehicles, mopeds, mobility scooters, quads	[3]	
	(b) Any <b>three</b> from: reverse, cross the central reservation, drive against the traffic flow, drive on the hard shoulder, exceed the 70 mph speed limit, "undertake"	[3]	
	(c) Any <b>three</b> from: pull onto the hard shoulder, exit the vehicle by the LHS, hazard lights go to the nearest emergency phone, return and wait near your vehicle.	[3]	9
29	A 60	[1]	
	B 50	[1]	
	C 60	[1]	
	D 60	[1]	
	E 60	[1]	
	F 40	[1]	6

		AVAILABLE MARKS
<b>30 (a)</b>	30.1 end of minimum speed limit	[1]
	30.2 end of motorway	[1]
	30.3 no through road	[1]
	30.4 side winds	[1]
	30.5 hump bridge	[1]
	30.6 queues ahead	[1]
	<b>(b)</b> reserves parking space, gets disabled person closer to desired destination, wider parking, accessibility made easier	[1]
<b>(c)</b> an area controlled by meters with limited time	[1]	
<b>(d)</b> Any <b>three</b> from: near a school, at a bus stop, at a level crossing, brow of hill, on a bend, near a junction, on yellow lines, hard shoulder on motorway	[3]	11
<b>31 (a)</b> motorists can't see the corner, motorists have to move out into opposite lane to pass	[2]	
<b>(b)</b> reverse to leave passing room	[1]	
<b>(c)</b> bus may reverse into passing vehicles	[1]	4
<b>Legal Requirements</b>		
<b>32 (a)</b>	1. policyholder	[1]
	2. insurance company	[1]
	3. insurance certificate	[1]
	4. premium	[1]
	5. no claims discount	[1]
<b>(b)</b> full driving licence, at least 21 yrs of age, driving minimum 3 yrs	[3]	8
<b>33 (a)</b> Any <b>four</b> from: exhaust, seat belts, lights, brakes, steering, suspension, horn, tyres, wipers, windscreen washer	[4]	
<b>(b)</b> Any <b>two</b> from: tread depth, foreign bodies, pressure, side wall damage	[2]	6
<b>Road Transport and Its Effect on Society</b>		
<b>34 (a)</b> Any <b>two</b> from:  Advantages: no traffic jams, less stressful/relaxing, no parking worries	[2]	
Disadvantages: cost, scheduled times, may not get you close to destination, crowded, delays	[2]	
<b>(b)</b> Any <b>three</b> from: carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons, sulphur dioxide, lead	[3]	7

### Motoring Mathematics

			AVAILABLE MARKS
35	(a) 5–10	[1]	
	(b) Any <b>two</b> from: children playing/unsupervised/unpredictable/not street wise/ not aware of dangers, hard to see	[2]	
	(c) 6822	[1]	
	(d) 20–24	[1]	
	(e) Any <b>two</b> from: less careful, young, fast cars, macho image, less experience, over confident	[2]	7
36	(a) £33,650	[1]	
	(b) £444.16/£444.17	[2]	
	(c) (i) 176 miles	[2]	
	(ii) 58.66 mph	[2]	7

### Collision Procedures

37	(a) 4 minutes	[1]	
	(b) mouth to mouth resuscitation/CPR	[1]	
	(c) Any <b>three</b> from: notebook and pen, torch, fire extinguisher, warning triangle, reflective clothing, first aid kit, mobile phone, blanket	[3]	
	(d) Any <b>two</b> from: sit the person down, loosen clothing, wrap extra clothing round person, raise lower limbs if possible, keep a check on breathing, offer reassurance, nothing to eat/drink	[2]	7

### Motor Vehicle Technology

			AVAILABLE MARKS	
<b>38 (a)</b>	Any <b>four</b> from: (flash) lights, horn, indicators, hazard lights, brake lights, reversing lights	[4]	10	
<b>(b)</b>	coolant level, anti-freeze, condition of pipes/hoses, check for leaks	[4]		
<b>(c)</b>	1. to reduce friction/wear 2. to cool surfaces	[2]		
<b>39 (a)</b>	1. piston 2. connecting rod 3. gudgeon pin	[1] [1] [1]	9	
<b>(b)</b>	crankshaft	[1]		
<b>(c)</b>	1. driver 2. more 3. vacuum 4. inlet	[1] [1] [1] [1]		
<b>(d)</b>	universal joint	[1]		
<b>40 (a)</b>	1. Fig. 40.3 2. Fig. 40.1 3. Fig. 40.2	[1] [1] [1]		
<b>(b)</b>	transmission	[1]	9	
<b>(c)</b>	1. clutch 2. gearbox 3. final drive 4. universal joints 5. propeller shaft	[1] [1] [1] [1] [1]		
<b>41</b>	Speed limit is maximum speed, exceeding speed limits increases risk of an accident, it is illegal to exceed the limit, circumstances may dictate a lower safe speed	[6]		6
<b>42 Dangers:</b>	Vision restricted to range of lights, harder to see puddles/surface water, can be blinded by headlights of other motorists, strange roads catch motorists unawares			10
<b>Precautions:</b>	Check dipped, headlights and fog lights working and windscreen washer; drive slower, increase 2 second rule, allow more time for journey, don't drive when tired, don't park at night facing against the direction of traffic flow, ventilate	[10]		

**43 Vehicle preparation:**

Fuel, windscreen washer, lights, tyres, seating position, adjusted mirrors, loads are legally secured, serviced

**Route planning:**

Sat nav set, planned rest stops, familiarise route, approx. journey time including rest stops, junction exit numbers, tolls

**Driver strategy:**

MSM, 2 second rule, shared driving, speed limits

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

**Level 1 ([1]–[3])**

The candidate may focus only on one or two of the required references and answers may 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 ([4]–[7])**

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 ([8]–[10])**

The candidate addresses at least two 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. [10]

**Total****AVAILABLE  
MARKS**

10

**160**