SCOTTISH QUALIFICATIONS AUTHORITY

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DANGEROUS GOODS SAFETY ADVISER EXAMINATION

EXAMINATION BOOKLET – ROAD

SAMPLE LAYOUT

……
Candidate's signature

Candidate's Name …… / ……..
Surname **Forename(s)**

Date of Birth /

Examination Centre ……..…

Paper 3
1400 – 1545

Seat no:

NOTES

1. You are required to complete the section above in BLOCK CAPITALS.
2. You must sign the examination booklet in the box provided in the top right hand corner.
3. You must enter your seat number in the box provided.
4. You must not detach any sheets from the examination booklet.
5. Attempt ONE case study from Section A and **ALL** of Section B.
6. Do not write anything below this line.

For Markers' use only

Marks Awarded

Section A	Section B				**Total Marks**
	2	3	4	5	

Marker's initials …… Principal Marker's initials ……

For SQA use only

Script checker's initials …….

INSTRUCTIONS TO CANDIDATES

It is recommended that you read through the paper before answering any questions

Candidates are only required to record references to the 2004 "Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations (CDGRR 04)" where one has been **specifically** asked for in a reference box within the examination paper.

Questions may be answered in any order and it is recommended that you answer those questions you consider to be the more straightforward questions first.

You need to gain at least 32 marks to pass this paper.

Answers to questions must be given in the space provided below each question.

In your answers, use the permitted abbreviations for reference documents contained in the handout.

All answers **must** be in ink.

If you need extra space, write "continued" and finish your answer in the space provided at the end of this booklet. Make sure you mark any continuation with the question number.

Rough work, not intended to be read by the marker, should be scored out.

No part of this booklet is to be torn out. No writing is allowed on any other paper.

No unauthorised material may be brought into the examination room.

No talking or other means of communication between candidates is allowed during the examination. Any candidate found to be doing so will be subject to instant dismissal from the examination room. All queries should be directed to an invigilator.

You may not leave the examination room during the first 30 minutes or last 15 minutes of the examination, unless you are ill. In this case, let an invigilator know and s/he will make sure the correct procedure is followed.

You must hand your booklet to an invigilator before leaving. **Booklets must not be removed from the examination room under any circumstances.**

Please note that this is a sample paper only. Questions and answers my be incomplete.

Please indicate, by ticking the appropriate box, which version of ADR you are using in this examination. You do not need to repeat the year of publication in your answers.

ADR 2003	ADR 2005
✔	

[Turn over for Section A on *page four*]

Answer ALL questions

Marks

Notes: When you use a reference document to find your answer, you must include the following information – the document title and, as appropriate, the relevant regulation, schedule, paragraph and sub-paragraph e.g. CDGRR 04 Regulation 5, Schedule 1 or part, chapter and section e.g. ADR 1.1.1.2. Marks may be lost if relevant detail is omitted.

Give your answer in the space provided below each question.

Remember to include details of your references in the box provided or, where there is no box, include reference as part of your answer.

Attempt ONE case study from Section A and ALL of Section B.

SECTION A

Answer ONE of the following case studies. You have a choice of three.
(Usually, there is a choice of five Case Studies in the actual examination.)

Case Study 1A

It is propose to use a road tanker to transport glycidaldehyde from Paris to Glasgow.

For the purpose of the question, **ignore** the implications of any part of the carriage being by sea.

(a) State the full ADR classification and description of this material **(4)**

Answer: 2622 Glycidaldehyde, 3, II, ADR

Reference	**2003 ADR: Table B, 3.2.2. Table A 3.2.1.**

(b) What is the "tank code" for this substance and explain its meaning? **(4)**

Answer:
L4BH
L – tank for substances in the liquid state
4 – minimum calculation pressure in bar
B – tank with bottom-filling and discharge openings with 3 closures
H – hermetically closed tank

Reference	**2003 ADR: Table B, 3.2.2. 4.3.4.1.1, 6.8.2.1.14.**

(c) Explain the meaning of the special provisions. **(4)**

Answer:

TU15 – tank shall not be used for the carriage of foodstuffs

TE1 – if fitted with safety valves, bursting discs shall be placed before the valves

Reference	**2003 ADR: 4.3.5, 6.8.4(b)**

Attempt ONE case study from Section A and ALL of Section B.

Marks

Remember to include details of your references in the box provided or, where there is no box, include reference as part of your answer.

1A (continued)

(d) The road tanker is subject to periodic inspection. **(1)**

(i) What is the maximum interval between inspections?

Answer: Six years

Reference	**2003 ADR: 6.8.2.4.2**

(ii) List **four** items of information relating to the inspection which must be marked on the shell of a road tanker or on an attached corrosion-resistant plate. **(4)**

Answer: Approval number
Manufacturer's name or mark
Manufacturer's serial number
Year of manufacture

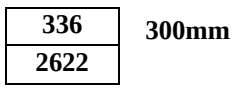
Reference	**2003 ADR: 6.8.2.5.1**

(e) (i) State the marking to be applied to the vehicle, including its location **(3)**

Answer:

Either
1. plain orange plate at front and rear
2. orange plate with HIN & UN at each side

or
orange plates at front and rear with HIN & UN



Reference	**2003 ADR: Table A, 3.2.1. 5.3.2.1.1-6**

(ii) What dimensions should this marking be? **(1)**

Answer: 400 mm x 300 mm

Reference	**2003 ADR: 5.3.2.2.1**

Attempt ONE case study from Section A and ALL of Section B.

Marks

Remember to include details of your references in the box provided or, where there is no box, include reference as part of your answer

1A (continued)

(f) (i) State the labeling to be applied to the road tanker, including its location **(3)**

Answer: Class 3 Placards on both sides and at the rear
Class 6.1 Placards on both sides and at the rear

Reference	**2003 ADR: 5.3.1.4, Table A, 3.2.1**

(ii) What dimensions should this label be? **(1)**

Answer: 250 mm x 250 mm

Reference	**2003 ADR: 5.3.1.7.1**

(g) In addition to the transport document, what other documentation must be carried? **(6)**

Answer:
The instructions in writing (5.4.3.)
Certificate of Approval (9.1.2.)
Driver's Training Certificate (8.2.1.)
if applicable, the permit authorizing the transport operation.

Reference	**As above**

(h) You are the DGSA for the employer of the driver involved in this journey. The vehicle has an accident which causes it to turn on its side and the load to leak. A person is made ill by the leaking fumes. What are the legal requirements with which you must comply? **(4)**

Answer
1. **Ensure an investigation of the accident is carried out and a report is made.**
2. **Monitor the implementation of any recommended actions.**
3. **Ensure DGSA's employer has a copy of the report**

Reference	**2003 ADR: 1.8.3.6.**

(35)

Attempt ONE case study from Section A and ALL of Section B.

Marks

Remember to include details of your references in the box provided or, where there is no box, include reference as part of your answer

Case Study 1B

A consignment of packaged dangerous goods as shown below is to be conveyed from Aberdeen to Madrid in a freight container. The journey cannot be completed in a day so the vehicle carrying the container will be parked overnight. The load consists of:

1 UN2054 packed in 2 x 210 litre steel drums;
2 10 x 50 litre plastic drums of UN1838;
3 UN2699 packed in 4 wooden boxes each containing 50 x 1 litre glass bottles;
4 A consignment of UN1993. The product contains ethyl acetate and acetal. It has a flashpoint of 25 ºC and an initial boiling point of 67ºC. It is packed in 30 x 30 litre steel drums.

(a) Complete the following table. **(12)**

	Proper Shipping Name/Designation	UN Number	Class	Packing Group	Quantity
1		UN2054			2 x 210 litre drums
2		UN1838		II	10 x 50 litre plastic drums
3		UN2699	8		4 wooden boxes each containing 50 x 1 litre glass bottles
4		UN1993			30 x 30 litre steel drums

Reference	

(b) These consignments will be loaded to the same vehicle. State giving reasons for your answer, whether that vehicle's journey is subject to ADR Regulations. **(5)**

Reference	

Attempt ONE case study from Section A and ALL of Section B.

Remember to include details of your references in the box provided or, where there is no box, include reference as part of your answer

Marks

1B (continued)

(c) What dangerous goods information relating to the substances must be displayed on the vehicle and the container during the journey? In your answers, identify the minimum dimensional requirements for this information. **(8)**

(i) Vehicle.

(ii) Container.

Reference	

(d) When selecting a suitable overnight parking location, must the driver of the vehicle comply with the special supervision and parking duties specified in the ADR? Briefly explain your answer. **(3)**

Reference	

(e) Provide a transport document entry for the consignment described under item 4 – UN1993. **(4)**

Reference	

(f) On arrival at the consignee's premises, one of the drums containing UNI838 is found to have leaked into the container. Identify **one** action which must be taken. **(3)**

Reference	

(35)

SECTION B

Marks

Answer ALL questions

Remember to include details of your references in the box provided or, where there is no box, include reference as part of your answer

2 (a) State whether approved vocational training is required for a driver of a vehicle with a permissible maximum weight of 5 tonne carrying 3 x 4 litre nominal capacity cylinders of compressed chlorine, giving reasons for your answer. **(3)**

8.2.1.1. specifies training requirements for drivers of vehicles with a permissible maximum mass exceeding 3500kgs. Chlorine is Transport Category 1 and 1.1.3.6.3. shows less than 20 litres is exempt ADR requirements. The driver does not need approved vocational training.

Reference	**As shown in answer**

(b) Using ADR, what type and number (ie how many) of fire extinguishers should be carried on the vehicle? **(2)**

One portable fire extinguisher for the inflammability classes A, B and C, with a minimum capacity of 2kg dry powder (or an equivalent capacity for any other suitable extinguishing agent).

Reference	**2003 ADR 8.1.4.2.**

3 A GB registered tank vehicle is carrying Sulphuric Acid, Fuming. The Hazard Warning Panel shows 4WE. **(2)**

(a) What placard and UN Number should be shown?

Answer:

UN 1831
Placard for Class 8

(b) Explain the meaning of the "4" and the "E". **(3)**

Answer:

"4" – Use dry agent
"E" – Consider evacuation procedures

Reference	**Dangerous Goods EAC List. Extract provided.**

SECTION B

Marks

Answer ALL questions

Remember to include details of your references in the box provided or, where there is no box, include reference as part of your answer

4 A consignment of packaged dangerous goods is being shipped by the road and sea from Germany to Italy. **(2)**

For the purpose of the question, **ignore** the implications of part of the carriage being by sea.

(a) List **two** items, specific to the product, that must be shown on the transport document for the road journey.

Answer:

The UN Number
The Proper Shipping Name

Reference	**2003 ADR: 5.4.1.1.1.**

(b) What language(s) must the transport document be in? **(3)**

Answer:

An official language of the forwarding company (German)
If this is not German, French or English, then additionally in one of those three languages

Reference	**2003 ADR: 5.4.1.4.1.**

[END OF QUESTION PAPER]

CONTINUATION SHEET

This page may be used if further space is required for your answers.

Remember to clearly mark each question number and include details of your references

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