

Answering DGSA Exam Questions – Guidance Notes

The following guidance is intended to help you understand how to approach answering questions in the DGSA examination papers.

General guidance

As with any examination, it is essential that you read the questions carefully and take account of any requirements to ‘**explain**’ or ‘**show**’ how you reached your answer. This enables the person marking your script to make maximum allowances for any errors and/or omissions.

You are only required to record references to the 2009 “Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations (CDG2009)” as amended, where one has been specifically asked for in a reference box within the examination paper.

Typical questions and sample answers

The following examples illustrate how to approach answering DGSA examination questions. The **answers** are shown in red; the text in *italics* is provided for *guidance* purposes.

Example 1 is a typical question covering dangerous goods classification and identification procedures; these are key syllabus <http://www.sqa.org.uk/sqa/3963.html> subjects in the ‘Core’ and ‘All Classes’ examination papers.

Example 1

Your company is intending to manufacture a new liquid product with the following properties: it has an LD₅₀ (dermal) of 270mg/kg; it also has a flashpoint of 15°C and an initial boiling point of 85°C.

Using RID/ADR state:

- i) The class and packing group for this liquid, showing how you reached your answer

The LD₅₀ information provided in the question implies that the liquid is toxic whilst the flashpoint and boiling point data imply that the liquid is flammable; the sections covering the classification of toxic substances (class 6.1 – RID/ADR 2.2.61) and flammable liquids (class 3 – RID/ADR 2.2.3) must therefore be checked; the hazard precedence procedures (RID/ADR 2.1.3) must then be used to determine the final classification

*You are required to **show the procedure** you use to obtain the answer*

LD₅₀ (dermal) 270mg/kg = Class 6.1, PGIII;
Flashpoint 15°C and Boiling point 85°C = Class 3, PGII
Hazard precedence = Class 3, PGII

Answer: Class 3, Packing Group II

Reference	RID/ADR 2.2.61.1.7, 2.2.3.1.3, 2.1.3.10
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- ii) The UN number and proper shipping name for this liquid, showing how you reached your answer

Once the classification has been determined, the Class 3 section (RID/ADR 2.2.3) should again be referenced to determine the proper shipping name for this new liquid, using the most appropriate option from the list of 'collective entries' for Class 3; the name must reflect the presence of the toxic subsidiary risk

*You are required to **show the procedure** you use to obtain the answer*

The liquid is a flammable liquid (Class 3) with a toxic subsidiary risk

The applicable 'classification code' for the liquid is FT1

The most accurate option from the 'collective entries' for Class 3 must be used

Answer: UN1992 Flammable liquid, toxic, n.o.s.

Reference	RID/ADR 2.2.3.1.2, 2.2.3.1.3, 2.2.3.3
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Example 2 relates to the transport warnings required on a package to identify the substance concerned. Package 'marking and labelling' is a subject included in the [syllabus](http://www.sqa.org.uk/sqa/3963.html) <http://www.sqa.org.uk/sqa/3963.html> for the 'Core' and 'All Classes' examinations.

Example 2

A drum containing 100 litres of Isobutyryl chloride is being shipped from Milan to Paris. How must the drum be marked and labelled for transport?

*The question is asking for the 'mark(s)' **and** 'label(s)' specific to this substance – details of both must be provided in the answer; reference must be made to the alphabetical index (Table B) and the UN number index (Table A/DGList) in RID/ADR for the relevant substance information; chapter 5.2 identifies the required mark(s) and label(s); the type of packaging can influence the answer to a marking/labelling question*

Answer: Mark = UN2395; Labels = Class 3 and Class 8

Reference	RID/ADR 5.2.1.1, 5.2.2.1.1
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Mode (Road / Rail / Inland Waterway) examination papers

Each of the 'Mode' papers incorporates a 'case study' which is worth 70% of the total marks available for the paper.

The case study comprises a series of questions relating to the transport of a particular substance(s).

Essential background information about the substance(s) and the journey concerned are provided at the beginning of the case study and these details must be cross-referenced in order to answer the questions accurately.

When you attempt a case study, you **must** consider the implications of all the information you are given in the question before you determine your answers.

Key factors include:

- the name, class, subsidiary risk(s), if any, and transport category of the substance(s)
- the type of packagings, e.g. single, combination, IBC.,
- the type of tank, e.g. RID/ADR, fixed tank or tank-container, UN portable tank.,
- the type of transport unit carrying the load, e.g. vehicle or freight container
- the possibility of exemptions which could affect procedures or requirements, particularly for packaged dangerous goods, e.g. 'Limited Quantities' (RID/ADR 3.4) or the total load quantity being carried on the transport unit (ADR 1.1.3.6)

Sample papers

You will need access to the regulations and supporting documents referenced in the list of Permitted Exam Materials <http://www.sqa.org.uk/sqa/1583.html> in order to attempt all the sample papers provided on this website.