

# CHARTERED INSTITUTE OF LOGISTICS AND TRANSPORT IN IRELAND

## PRINCIPAL MARKER'S REPORT FORM

### DANGEROUS GOODS SAFETY ADVISER EXAMINATION

#### PART TWO – COMMENTS MAY BE CIRCULATED

<b>No Attempting Examination:</b>	51
<b>No Passing Examination:</b>	36
<b>% Pass Rate:</b>	70.59%
<b>Average Mark:</b>	49.23 across the two case studies candidates were required to take.

#### A. General Comments

A reasonable set of results for the new style of paper where candidates were asked to take one compulsory case study and a choice of two others. No one quite achieved full marks for both case studies taken though one person managed 100% each on the first and second case studies. Over both case studies taken 12% of candidates achieved 90% or more.

Candidates had a compulsory case study based on the international transport of a hot substance in fixed tanks (road tankers). This was well answered on the whole, the average mark being 28.92 and 90% of candidates achieving a pass. Comments on this case study follow below.

Candidates had a choice of two other case studies to take. The first (Case Study 2) concerned the international transport of a mixed load of four dangerous goods in packages. There was a hint in the description of the third item in the load that it was a Limited Quantity and which should therefore condition the answers given to several parts of the question. Although this was the more popular of the two section B questions, it was not well answered this time certainly in comparison when a similar case study has been set in the past. The average mark was 20.89 and only 41% of candidates who took this case study achieved the necessary 65% or more to achieve a pass on this case study.

44 of the 51 candidates sitting this diet of exams chose Case Study 2.

The second concerned the distribution of gases in cylinders within the State. Fewer candidates (7) chose this. The results for candidates who chose this case study were comparable with when a similar case study to this one was set in the past. Whilst saying this, the results of the individual papers showed some variances. 71% of candidates who took this case study achieved the necessary 65% of the 35 marks to pass this particular case study.

## Comments on Individual Questions

*Please make comments as appropriate for each question.*

### Compulsory Case Study 1

Fundamental to good success with this case study was the establishment of the correct classification, Proper Shipping Name and UN number for the substance described in the question. The correct UN number was UN 3257, Proper Shipping Name Elevated Temperature Liquid, N.O.S. (...technical name...). 8% of candidates chose the near but nevertheless incorrect UN 3256. Other choices included UN 3111, UN 3161, UN 3183 and UN 3233. Candidates who chose the wrong UN number were given some benefit where knowledge and application of the regulations were otherwise shown based on the early wrong decision on the UN number in keeping with our marking policy over the years which has not changed.

A few candidates based their answer to the second part of this case study on the T-code system of nomenclature for UN multimodal portable tanks instead of the correct RID/ADR four-field tank code system. Marks were lost for this.

Candidates were asked to show the dangerous goods information to be shown on the transport document. A key part of this was to note that the oft-mentioned in these reports Special Provision (SP) 274 applied to the UN number (as it did for the wrongly chosen UN numbers, too, as it happens) requiring the technical name given in the question to be inserted in brackets after the technical name. 51% of candidates either did not insert the technical name and/or give the references required for this action. This should be the Dangerous Goods List column number for special provisions, Chapter 3.3 for the meaning of SP 274 and 3.1.2.8.1 which explains more about this procedure.

In a subpart to this part of the case study on transport documents candidates were asked in what languages it should be prepared. I expected candidates to draw a conclusion i.e. that only one language was required as the language of the forwarding country was the same as one of the three official languages of the ADR (English, French and German). I expected candidates to draw this conclusion and not merely to repeat the text of the paragraph containing the languages requirement.

Candidates were asked to say what the entry for the substance on a *new* transport document should be for the substance where residues remained in the road tanker back to the original country where loading took place. 31% of candidates told me what could be done with the old document for the full out-bound road tanker to make it into an acceptable document for the return journey. This was not asked for in the question as it was made clear a new document had to be prepared. A few thought that the residues in the road tanker would count as a waste for documentation purposes but that would not normally be the case with such residues.

In a three part question about the marking and placarding of the road tanker, 15.5% of candidates did not tell me that orange plates with the Hazard Identification Number and UN number were required. Most identified the correct placard that was required and as well as the additional elevated temperature mark

In relation to the first part of a three-part question on fire extinguishers. In the first part, candidates were asked for the total quantity of *extinguishant* which was required on the road tanker, not the number of *extinguishers*. I was looking for 12 kg as the answer. 41% of candidates said “2” which is the number of extinguishers.

A final part of the case study concerned whether the same substance could be transported in bulk as opposed to transport in tanks. Virtually all those who got the correct UN number at the start got this right, basing an answer on special provision for transport in bulk VC10.

## Case Study 2

This was a case study based on the international transport of four dangerous goods in packages.

One of the keys to answering this case study well was to recognise that one of the substances, a flammable solid of Class 4.1 was very likely a Limited Quantity meaning that many exemptions for it would be available to the consignor and carrier. I expected candidates to realise this and to say in the appropriate sections of the case study to rule out the relevance of this part of the consignment accordingly. This part was not answered to the standard it should have been. Maybe only three or four candidates realising this and then not for all parts of the case study to which exemptions for this part of the consignment would be available as a Limited Quantity.

Initially candidates were asked to state the “Special Provisions for carriage - operation” for three of the four candidates meaning the details from column (20) of the Dangerous Goods List. 51% of candidates gave some other answer when I wanted S2 and S4 for the first substance, S9 for the second and S4 again for the third. Some thought that the Special Provisions from column (6) were wanted whilst others listed the V or VC provisions.

In the second part, candidates were asked what was missing from an entry for dangerous goods on a transport document. The key to the question was to realise that both Special Provision 61 and Special Provision 274 applied to the substance concerned meaning that a technical name had to be added after the Proper Shipping Name and that Special Provision directs one to suitable sources for the technical name in the case of the substance in the question. The question was not answered well. 43% of candidates failed to say anything about Special Provision 61 in their answers and there was a wide variety of other answers ranging from a missing Transport Category or missing Classification Code, neither of which is required on dangerous goods transport documents to the word ‘overpack’ which was neither relevant nor required on transport documents. One candidate answered that the Proper Shipping Name should have been written in capital letters – I refer candidates to the explanation of column (2) of the Dangerous Goods List at the start of Chapter 3.2 about this. Also, worth looking in the air mode regulations at the examples of how to complete a transport document for this mode of transport where the point is made even more clear.

In the fourth part, a question similar to one set in Paper 1 was given to candidates about what documents should be present all the way from the consignor to the consignee for dangerous goods. 34% of candidates who took this case study gave the Vehicle Packing Certificate which, as a careful reading of 5.4.2 will make clear, is only required up to the port of departure when transport by sea is required. This is essentially an IMDG Code document which ADR has taken over and is intended for retention by the shipping line.

Some thought that the certificate of approval of the vehicle was needed when this is only needed for explosives and tank vehicles. Some, too, thought the competent authority approval is needed. This document is rarely needed and, for the most part, concerns the transport of explosives.

In a sixth part of the case study, candidates were asked about the *additional* miscellaneous which should be carried on the vehicle and why. I expected candidates to say an escape mask because there was a substance which required a No. 6.1 label in the consignment and then a shovel, collecting container and drain seal because there were two substances with a No. 3 label in the consignment. 34% of candidates who took this case study did not read the question properly, it seems, and gave from the list of normal miscellaneous items such as wheel chocks, eye rinsing liquid, etc. which was unacceptable. Only two or three candidates read this correctly that the Class 4.1 substance could be discounted as it was probably a Limited Quantity. The provisions of Chapter 8.1 of the ADR are not mentioned in 3.4.1 (h) as being one of the provisions from Part 8 applicable to Limited Quantities.

In the seventh part, candidates were asked whether it was permissible to carry the four items of dangerous goods as a single load. Candidates were expected to use the segregation table in Chapter 7.5 of ADR. 16% of candidates who took this case study attempted this question as a ‘mixed packing’ question instead of a ‘mixed loading’ question. Very, very few candidates eliminated the Class 4.1 substance from the question as it could be exempted as a Limited Quantity. The question specifically advised candidates to take the fact that the Class 4.1 substance was in very small boxes.

An eighth part asked how much of one of the substances could be transported on vehicles without orange plates. It required candidates to recognise that Transport Category 3 applied to the substance and then to go to the table for the load exemptions in 1.1.3.6.3 to discover that 1000 litres could be carried on a vehicle without the need for the plates to be displayed. 27% of candidates attempted an answer from some other perspective and 18% could not make any attempt.

In the ninth part, candidates were asked whether any of the four items in the consignment counted as High Consequence Dangerous Goods (HCDG). The first step candidates could have taken was yet again to eliminate the Class 4.1 item because it could be transported as a Limited Quantity. Limited Quantities packages are exempted from the provisions of Chapter 1.10 – see 3.4.1 (a) which lists those parts of Part One of ADR that do apply to Limited Quantities.

With respect to the remaining three items, candidates typically did not answer “as fully as you can” as requested in the question. I expected candidates to say that for the Class 6.1 substance, the HCDG rules only apply to substances of this class at the Packing Group I level. The substance in the question was Packing Group III. I then expected candidates to eliminate the other two flammable liquid substances as the HCDG rules for Class 3 only apply when the substances are transported in tankers >3000 litres and that no Class 3 substances count as HCDG when transported in packages.

The final part of this question concerned whether the substance could also be carried in bulk as opposed to carriage in tanks. It required candidates to discover that Special Provision for carriage – bulk VC10 applied to the substance in the question. Those who got the right UN number at the start of the Case Study found little difficulty with this question but e.g. those who chose the incorrect UN 3256 could not do this question as there is no equivalent provision for dangerous

goods of this UN number.

One of the questions concerned how the transport document for the outbound laden road tanker could be used for the return journey. I wanted candidates to say that the quantity should be struck out and replaced by the words “EMPTY, UNCLEANED, RETURN”.

### **Case Study 3**

This was the least answered case study. The results were of a high variance.

The first part about the UN number, classification code, transport category and tunnel code of the three gases in the question was well answered on the whole.

In the second part where there were questions about the required test pressure for the pressure receptacles in which the three gases were allowed to be transported. In the second part candidates were asked about the maximum permitted filling ratio for two of the gases in the liquefied state.

There was a segregation question about the three gases – could they be transported as a single load? It meant looking at the segregation table in Chapter 7.5. Some saw the question as ‘mixed packing’ question using the MP codes instead of a ‘mixed loading’ question which was not what was wanted.

Otherwise questions about fire extinguishers, the S provisions which contain the quantity triggers for the application of the vehicle supervision chapter 8.4 and about Special Provision for carriage – loading, unloading and handling CV10 did not cause too much trouble even for the weaker candidates.

#### **C. Comments on Candidates' Performance (include identification of any gaps in knowledge\areas of weakness)**

Any comments appear above.

#### **D. Comments on the Marking Process**

None.

SIGNATURE: .....DATE: 23.03.19

Roadreport/dgsa