

CHARTERED INSTITUTE OF LOGISTICS AND TRANSPORT IN IRELAND

PRINCIPAL MARKER'S REPORT FORM

DANGEROUS GOODS SAFETY ADVISER EXAMINATION

SUBJECT: ALL CLASSES

EXAMINATION DATE: 24th March 2017

No Attempting Examination:	48
No Passing Examination:	40
% Pass Rate:	83.33%
Average Mark	39.52

General Comments

- A good set of results although the average mark was down a little. Congratulations to the one person who achieved a perfect score. Four candidates fell short by one mark and a further four by two marks.
- I continue to stress that candidates must show in their answers how they have handled technical data presented in the questions.
- Candidates should note that a mixed packing box is not an overpack.
- Candidates should clearly understand the difference between “marks” which has to go on a package and “labels” which may have to go on. Labels are those diamond shaped signs which indicate the class and division of the goods. Any other sign which has to go on a package such as the orientation mark the environmentally hazardous mark are marks and *not* labels.

A. Comments on Individual Questions

Please make comments as appropriate for each question.

- Q1. This question was in two parts. The first part required candidates to classify a weak solution of two flammable liquids and to determine its Packing Group and Classification Code. Few candidates had any difficulty with this, correctly choosing the Packing Group though some thought it to be Packing Group I or Packing Group II

The second part required candidates to determine a suitable Proper Shipping Name and UN number which was UN 1993. 14.5% of candidates chose UN 1224 but this was not allowable as only one of the two flammable liquids in the mixture was from the ketone family of chemicals and the other from the alcohol family. One or two candidates got somewhat confused, possibly by the boiling point datum given in the question and said the correct UN number was UN 3256.

As an “N.O.S.” Proper Shipping Name, it had Special Provision (SP) 274 ascribed to it meaning that the Proper Shipping Name had to be completed, in this case, by the technical names in brackets of the two dangerous substances. Many either did not mention that SP 274 applied to justify the inclusion of two technical names in brackets after the main part of the Proper Shipping Name or did not include any technical names in the first place. In addition many did not give the full referencing for SP 274 as outlined below:

DG List, Chapter 3.2 to discover that SP 274 applies



Chapter 3.3, 3.3.1 to discover the meaning of SP 274 leading one to 3.1.2.8 in Chapter 3.1



3.1.2.8 and in particular 3.1.2.8.1 in Chapter 3.1

48% of candidates did not mention in their answers that SP 274 applied in this case even if some instinct drove them to include the technical name of the two substances in brackets after their chosen Proper Shipping Name. 37.5% of candidates did not give their references in the manner outlined above.

- Q2. This was another two part question requiring candidates firstly to determine whether a substance could be transported as a Limited Quantity. Candidates were asked to give their answer as fully as they could. I particularly wanted candidates to state the 1 litre limit for the inner packagings which virtually everyone did but 31% of candidates did not give the maximum permitted gross mass for the boxes which is, of course, 30 kg. A mark was lost for this omission. I would have expected candidates that two inner packagings as a minimum would have had to be used for the quantity in the question but 17% of candidates did not go as far as drawing this conclusion. One candidate attempted the question under the Excepted Quantities provisions but the way in which the question was worded ruled out this possibility.

In the second part, candidates were asked to state what marks and labels (if any) were needed on the boxes including any relevant dimensions. 31% of candidates did not address the issue of whether any labels were needed though they were asked to do this in the question whilst a few actually said a label was required. Candidates were asked to state all relevant dimensions. By this I meant the outer dimension for the Limited Quantities mark of 100 x 100 mm and also the width of the border line joining the top and bottom parts of the mark together ($\geq 2\text{mm}$). 21% of candidates did not provide any dimensions at all in their answers or did not include the border line dimension.

The substance was a liquid therefore requiring the double-arrow orientation mark on two opposite faces of the boxes. Many of candidates did not mention the important point that two of these are required on opposite faces. Candidates should have justified this action by demonstrating e.g. from the substance's classification code that it is a liquid. (see also below in Q3).

Two candidates went so far as to suggest that Hazard Identification Numbers were required on the packages – strange.

- Q3. This was a major three part question worth, in total, 14 marks. In the first part, candidates were asked to say if mixed packing of two quantities of dangerous goods is allowed by the ADR and, if so, what is the minimum number of inner packagings that would be required. It required candidates to work out that the two substances had a total of three Mixed Packing Provisions (MPs) between them and to work on the allowances. It was well answered on the whole which was pleasing. 6% of candidates chose the wrong UN number for one of the substances which should have been UN 2318 instead of their chosen UN 2949.

One candidate mistook the question for a mixed loading question instead of a mixed packing question.

The second short part concerned an extra rule to be applied when considering doing the mixed packing. The words I was looking for occur in many of the MPs, that the mixed packing is allowed provided the chemicals will not react dangerously with each other – a key piece of transport safety. 29% of candidates could not do this second part of question 3 or gave some other answer. This is an unacceptable level of incorrect response as, as I have said before with this kind of question, this is an important safety consideration.

In the final part, candidates were asked to state the marks and labels to be shown on the outer box of the mixed packing. Two labels were required for the substances. Most said this correctly.

The box also needed to be marked with the two UN numbers of the substance. Candidates, as is so often the case, were told to answer this question “as fully as you can”. This meant among other things that I expected them to state what the two UN numbers actually were (even if they had already done this in the first part). 14.5% of candidates did not actually name the two UN numbers.

A crucial part of this question concerned the liquid substance which candidates were informed was environmentally hazardous (i.e. a water pollutant). The question then arose as to whether the environmentally hazardous mark was needed on the box. The answer was, in fact, no because the inner packagings used for this liquid had to be below 5 litres. There is an exemption at 5.2.1.8.1 from the need to display this mark on the box. No less than 56% of candidates did not tell me about this exemption as they should have done if they were to answer the question “as fully as you can”. There is no restriction in the use of this exemption no matter how many inner packages are placed in an outer box.

Most candidates thought correctly that the double-arrow orientation mark should be shown. As part of answering as fully as they can, I expected candidates to justify the use of the orientation mark by showing that one of the two substances was a liquid. This can be discerned from e.g. the Classification Code. No less than 89.5% of candidates failed to reason out that the substance in the question was a liquid. I do remind candidates of this. I also expected them to tell me that the orientation mark should appear on two opposite sides. 52% of candidates (cf: question 2) failed to say this.

- Q4. This question the new version of the Class 9 labels for lithium batteries. Virtually everyone got this right.

- Q5. In this question, candidates were asked to say why a very small quantity of a dangerous good would have to be packed in UN certified packagings. This was because there were no Excepted Quantities nor any Limited Quantities allowances. Most worked this out. 19%, though, were stumped by it.

In a second part, candidates were expected to realise that a quantity of the boxes had been turned into an overpack (with non-see through black plastic film) and to realise that the marking and labelling of the overpack was incomplete. Most realised that the question concerned an overpack and that this work should be marked on it. Candidates were asked to explain their answer as fully as they could which included noting that the mark “OVERPACK” had to be in the required languages. 37.5% of candidates failed to address the languages issue properly. One candidate even went so far as to tell me that this word should be marked in the language of the country of destination, Sweden. This (though it may surprise some) is not a requirement. What is needed is that the word be in one of the three official languages of the ADR – English, French or German as well as, in this case Italian for the forwarding country.

As a non-Limited Quantity, the overpack also needed to be marked with the class label. 12.5% of candidates did not state that a No. 8 label was required on the overpack.

What I found strange was that 35.5% of candidates told me the double-arrow orientation mark was required on the overpack. Not so. Firstly, as could be determined e.g. from the classification code of the substance, it was a solid. The orientation double arrows mark is not required when the inner packagings contain a solid. The boxes under the black plastic film forming the overpack would not need the double-arrows. The second reason for this is that it states in (revised for 2017) 5.1.2.1 (b) which states that you only put this mark on the overpack if they are required by 5.2.1.10. As they are not required for boxes containing solids, they are not required on overpacks.

- Q6. This was a short two part question on radioactives. Both parts were well answered on the whole. It would have been good if in the second part, candidates had mentioned the unit of measurement i.e. Bq/g. No mark was lost for this omission but even so 27% of candidates did not give this detail.
- Q7. This was a short question on one of the additional requirements for completing the transport document. It required candidates to determine that the word “HOT” to be inserted immediately before the Proper Shipping Name. Most candidates got it right though 16.5% of candidates resorted to the control and emergency temperatures details which was not correct. Some could not attempt the question or dealt with it as if it were a vehicle marking issue concerning the elevated temperature mark.
- Q9. This was a short question about Class 6.2 and UN 3373. It was reasonably well answered. A few candidates answered it as if the dangerous goods in the question were Category A pathogens of Class 6.2.

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.