

THE CARRIAGE OF DANGEROUS GOODS AND THE USE OF TRANSPORTABLE PRESSURE EQUIPMENT REGULATIONS 2007

INTRODUCTION AND EXPLANATORY NOTE

THIS DOCUMENT CONSISTS OF:

1. AN OUTLINE OF THE SYLLABUS **AS REVISED IN FEBRUARY 2008** AND THE OPTIONS AVAILABLE TO TRAINING PROVIDERS
2. THE TEXT OF THE SYLLABUS **AS REVISED IN FEBRUARY 2008**

IN THE OUTLINE AND OPTIONS:

“SERIAL” CROSS REFERS TO THE SERIAL NUMBER IN THE TEXT OF THE SYLLABUS

“TITLE” ALSO CROSS REFERS TO THE TEXT OF THE SYLLABUS

THERE ARE TWO SEPARATE OPTIONS FOR TRAINING ON THE CLASSES 2, 3, 4, 5, 6, 8 AND 9

“DURATION” IS THE TIME TO BE TAKEN BY EACH MODULE IN “TRAINING UNITS” – EACH UNIT BEING 45 MINUTES

“QUESTIONS” IS THE NUMBER OF QUESTIONS TO BE ASKED IN A MULTIPLE CHOICE EXAMINATION PAPER COVERING THAT MODULE

2008 SYLLABUS – OUTLINE AND OPTIONS
Issued by Scottish Qualifications Authority as appointed agent for Department for Transport

A. INITIAL COURSE

Serial	Title	Duration	Questions	Explanation
1 (001)	Initial Course – General Core Requirements	7	25	UK Core
2	Initial Course – Practical Exercises	4	Nil	UK Practical Exercises (3)
3 (003)	Initial Course – Packages Core Requirements	3	15	UK Package Module
4	Initial Course – Classes Common Characteristics			This serial enables the trainer to run a course covering 7 classes, and to follow the ADR initial course as set out in Chapter 8.2. In this option all seven classes must be covered.
	Common Characteristics of 7 classes	2	20	
	Specific Characteristics – Class 2	1.5	10	
	Specific Characteristics – Class 3	1.5	10	
	Specific Characteristics – Class 4	0.5	8	
	Specific Characteristics – Class 5	0.5	8	
	Specific Characteristics – Class 6	0.5	8	
	Specific Characteristics – Class 8	0.5	8	
	Specific Characteristics – Class 9	0.5	8	
	Total	7.5	80	
	Note: Common characteristics will be one paper module (013), and the classes will be taken as two further papers modules (014) Group A (Classes 2, 3, 6, and 8) and module (015) Group B (Classes 4, 5 and 9).			
5	Initial Course – Individual Class Modules			This serial follows the UK classes modules, and enables the trainer to use any combination of from Classes 1 to 9 (including classes 1 and 7). At least one class must be included in the course.
	Class 2	2	15	
	Class 3	2	15	
	Class 4	1	10	
	Class 5	1	10	
	Class 6	1	10	
	Class 8	1	10	
	Class 9	1	10	
	Total	9	80	
	TOTALS FOR THE GENERAL INITIAL COURSE	MIN 21 MAX 24	120	

6 (002)	Initial Course – Tanker Specialisation	10 (12)	20	This specialisation may be used instead of serial 3, Packages Core Requirements, or in addition to it. The minimum requirement is for at least one of these.
7 (004)	Initial Course – Class 1 Specialisation	8	20	
8 (010)	Initial Course – Class 7 Specialisation	8	20	
	TOTAL – ALL INITIAL COURSE OPTIONS	MIN 49 MAX 52	180	No time has been included for examinations, which are taken at the end of the course.

B. REFRESHER COURSE

Serial	Title	Duration	Questions	Explanation
9	Refresher Course – General Core Requirements	2	25	
10	Refresher Course – Practical Exercises	4	Nil	
11	Refresher Course – Packages Core Requirements	2	15	
12	Refresher Course – General Classes Requirements	Up to 4	Up to 80	
13	Refresher Course – Tankers Specialisation	2	20	
14	Refresher Course – Class 1 Specialisation	3	20	
15	Refresher Course – Class 7 Specialisation	3	20	
	TOTAL DURATION – REFRESHER COURSE (ALL OPTIONS) – UP TO:	22	180	No time has been included for examinations, which are taken at the end of the course.

C. COURSE STRUCTURE

INITIAL COURSES

All initial courses must start with serials 1 and 2 (General Core Requirements and Practical Exercises). These must normally be followed either by serial 3 (Packages Core Requirements), or by serial 5 (Tanker Specialisation) or by both of these.*

The minimum requirement is then at least one class to be taken from serials 5, 7 or 8. If a course is to cover the main 7 classes excluding Class 1 and Class 7, either serials 4 or 5 can be followed. The examinations for serial 4 can be used following a course conducted by serial 5.

All examinations are to be taken at the end of the course.

***COURSES COVERING CLASSES 1 AND 7**

If a candidate wishes to qualify only in class 1, or in class 7, or in classes 1 and 7, it will be permissible for the course to consist of serials 1 and 2 (General Core Requirements and Practical Exercises) and class 1 and/or class 7. NO packages or tanker specialisation modules need be covered when taking advantage of this concession.

Should the candidates who qualify under this concession subsequently wish to add other classes, either the packages module or the tanker module must also be taken.

Candidates for refresher training may also take advantage of this concession, although they may also take all of the modules covered by their current vocational training certificate.

REFRESHER COURSES

Candidates may not follow a course which includes any modules not on their current driver training certificate. Any additional modules must follow the initial training syllabus.

Training courses must follow the order; serial 8, then serial 9, followed by either serial 10 or serial 12, (or both of these), and then serials 11, 13 and 14 as appropriate.

Candidates taking part in refresher training will sit the same papers as initial candidates and will be taken at the end of the whole course.

Candidates who are unsuccessful in examinations following refresher training will be required to follow an initial course covering the failed modules before being re-examined.

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
1	Initial General Core Requirements	<p>1.1 The general requirements governing the carriage of dangerous goods, and specifically:</p> <p>1.1.1 The regulations under which this course of training is acquired, and the conditions under which training is authorised and a driver training certificate is issued</p> <p>1.1.2 The driver’s duty to transport dangerous goods safely through knowledge, skill, and careful driving</p> <p>1.1.3 The existence and application of the requirements of national and international regulations, agreements and codes of practice which apply to the transport of dangerous goods as they relate to the duties of the driver in particular, and with reference to the responsibilities of consignors, consignees, carriers and the public at large, with specific reference to ADR, RID, IMDG, ICAO and The Carriage Regulation.</p> <p>1.1.4 The allocation and use of UN numbers</p> <p>1.1.5 The existence and application of Packing Groups and Transport Categories.</p>	<p>By means of classroom instruction, class participation, the use of illustrative examples (particularly of the regulations in use), appropriate visual aids to impart a knowledge of, and the ability to retain knowledge and to apply to the role of a driver.</p>		7	3
		<p>1.2 The main hazards of substances in Classes 2,3,4,5,6,8 and 9.</p>	<p>As above, and also using a suitable visual presentation, eg video, CD or DVD..</p>			2

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		<p>1.3 Information on environmental protection in control of the transfer wastes, and specifically:</p> <p>1.3.1 The disposal of dangerous goods and wastes.</p> <p>1.3.2 National and international rules on the transfer of wastes.</p>	<p>By means of class room instruction, class participation, the use of illustrative examples (particularly of the regulations in use), appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the ability retain knowledge and to apply to the role of a driver.</p>			2

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		<p>1.4 What a driver should do and not do in the carriage of dangerous goods, and specifically:</p> <p>1.4.1. The non class specific operating procedures to be followed throughout a journey, as required by current national and international regulations including behaviour in tunnels</p> <p>1.4.2. Documents relating to the vehicle and to the driver</p> <p>1.4.3 Instructions in writing for national and international journeys.</p> <p>1.4.4 Checks before setting out, and during the journey</p> <p>1.4.5 The equipment to be carried by a vehicle on national and international journeys</p> <p>1.4.6 Vehicle security, supervision and parking rules, both national and international.</p> <p>1.4.7 An understanding of High Consequence Dangerous Goods and subsequent use of the Dangerous Load Card</p> <p>1.4.8 Action in the event of a breakdown</p>	<p>By means of class room instruction, class participation, the use of illustrative examples (particularly of the regulations in use), appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the ability retain knowledge and to apply to the role of a driver.</p> <p>This outcome must include the Video – Security of Dangerous Goods by Road</p> <p>By means of TRANSEC ‘Security Advice for Drivers’</p>			4

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		1.5 The purpose and the method of operation of technical equipment in use on vehicles, including emergency equipment	By means of class room instruction, class participation, the use of illustrative examples, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and ability to retain knowledge and to apply to the role of a driver.			1
		1.6 The prohibitions on mixed loading in the same vehicle or container, and in particular;				2
		1.6.1 The general and specific rules on the segregation of dangerous substances 1.6.2 The methods which may be used to segregate substances				
		1.7 Precautions to be taken during the loading and unloading of dangerous goods, and specifically; 1.7.1 Procedure at the vehicle loading point 1.7.2 Stowage, securing the load, and load security 1.7.3 Procedure at the vehicle unloading point.				3

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		1.8 General information concerning civil liability, including 1.8.1 The concept and application of the responsibility for civil liability and duty care to consignors, carriers and drivers 1.8.2 The basic differences between statute law and common law in the United Kingdom 1.8.3 National and international regimes of civil liability, and international conventions.				2
		1.9 Information on multi-modal transport operations, the interrelation of road/sea regulations, and operations at points of interchange				2
				Total	7	25 inc. 4 from Serial 2

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
2	Initial Course Practical Exercises	<p>What to do after an accident (first aid, road safety, basic knowledge about the use of protective equipment, etc), and in particular;</p> <p>2.1 The types of personal protective equipment available to drivers, and the particular uses and limitations of each type. Guidance on when the equipment should be worn. A demonstration or audio/visual presentation of the safest way to don and remove personal protective equipment, and how to decontaminate it.</p> <p>Equipment to be covered must be a minimum of hard hat, suitable goggles, visors, gloves, respirators and filters, chemical suit, high visibility jacket or vest, and protective footwear.</p> <p>2.2 The general action to be taken in an emergency involving a potential or actual spillage or release of dangerous materials, during loading, unloading and carriage, and the existence of specific national emergency instructions.</p>	<p>By means of class room instruction, class participation, the use of illustrative examples, a demonstration of all the equipment which the driver is likely to need to use and the safest way to put it on and take it off, and confirmation using questions.</p> <p>By means of instruction, followed by an exercise based on a written scenario and completed individually.</p>	<p>To satisfy an <u>experienced and competent instructor</u> that the actions which the candidate will take in the case of an accident or incident will be the most appropriate under the given circumstances.</p>	4 (in total)	4 inc. Serial 1

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		2.2 (cont.) What to do in an incident or accident in order to ensure personal safety and that of the public, including: <ul style="list-style-type: none"> - Informing and co-operating with emergency services - Minimising the consequences of the accident/incident - Warning and protecting the public - Ensuring personal safety - Using and safeguarding instructions in writing - Attending to the injured - Preventing the escape of hazardous materials, and contamination, including entry into drains and water courses - Dangers in confined spaces - Informing the operator 	By means of instruction, followed by an exercise based on a written scenario and completed individually.	To satisfy an <u>experienced and competent instructor</u> that the actions which the candidate will take in the case of an accident or incident will be the most appropriate under the given circumstances		

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		<p>2.3 The administration of basic emergency first aid techniques, including assessment of the situation, the need to protect oneself and other people, emergency treatment of burns, and treatment of chemical contamination, including the use of eye wash and control of bleeding,</p> <p>Assessment of the unconscious casualty and the situation in which the casualty is found, checking response and breathing , opening the airway, performing external chest compression, rescue breaths and placing the casualty in the recovery position.</p> <p>The instruction should ensure that emphasis is placed on the skill below in the following order;</p> <ol style="list-style-type: none"> 1. Contamination 2. Bleeding 3. CPR 	<p>By means of instruction and demonstration, using a suitable resuscitation model, and other members of the class as appropriate, and by practice on the model and on each other as appropriate, demonstrate the ability to perform correctly:</p>	<p>To satisfy a <u>qualified and competent instructor</u> of the candidates understanding of the required actions and in accordance with the latest and commonly accepted practice.</p>		
		<p>2.4 The nature of fire and the fire triangle, the importance of good practice and vehicle maintenance in fire prevention, how to extinguish or control tyre fires, the correct identification, selection and uses of the various types of fire extinguishers, how to use a fire extinguisher to put out a fire, and the associated risks of fires, including the release of dangerous gases and particles.</p>	<p>By means of instruction and demonstration, using examples of fire extinguishers and a <u>suitable video</u>.</p>	<p>To satisfy an experienced and competent instructor of the candidates understanding of the required actions in accordance with latest and commonly accepted practice.</p>		0-2

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
				Total:	4	4 inc in Serial 1
3	Initial Course Packages Core Requirements	3.1 The scope and application of national and international rules for the carriage of dangerous goods in packages and in bulk, including Packing Groups, Transport Categories, the definitions of “in scope” loads and exemptions by reason of limited quantity or size of load.	By means of class room instruction, class participation, the use of illustrative examples, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the ability retain knowledge and to apply to the role of a driver:		1	4
		3.2 The UN packaging scheme, including its performance testing (packages and IBCs), certification and application to national and international transport.			0.5	2
		3.3 The purposes and types of the various packages, containers and bulk carriers in use and their main characteristics, including the need for integrity, durability, containment and pressure retention under conditions of normal use.			0.5	3
		3.4 The loading and unloading of vehicles, associated procedures including vehicle selection, correct stowage, securing the load, protecting the load, checking for and dealing with leakages, dealing with spillage, and the segregation of incompatible materials.			0.5	2
		3.5 The operating procedures specific to packaged goods and bulk loads to be followed through both national and international journeys, including documentation, vehicle marking, parking rules and equipment for fire extinguishers, and the ways in which they are to be inspected and marked.			0.5	4

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
				Total	3	15
4	Initial Course Common Characteristics of the 7 Classes	4.1 The characteristics held in common by substances in classes 2,3,4,5,6,8 and 9, and in particular:	By means of class room instruction, class participation, the use of illustrative examples, a suitable video recording or live demonstrations under safe conditions, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the ability retain knowledge and to apply to the role of a driver:		2	
	4.1.1 The sources of information about individual substances, their dangers, and the precautions to be exercised when transporting them				2	
	4.1.2 The need for containment, and the prevention of escape, through correct packaging and careful handling				6	
	4.1.3 The need for substances to be segregated from each other, and from other loads.				3	
	4.1.4 The fact that dangerous substances may have subsidiary hazards in addition to their primary hazard, and that these may include toxicity, flammability, explosion, corrosivity, oxidation and asphyxiation.				2	
	4.1.5 The effects of the escape of dangerous substances, and the action to be taken in the event of an escape.				1	
	4.1.6 The significance of the miscibility or immiscibility, specific gravity, flammability, volatility and asphyxiant qualities of dangerous substances, and how to relate these properties to the work place.				1	

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		4.1.7 The need to avoid overheating substances or causing them to ignite, including the avoidance of sources of ignition.				3
		4.1.8 The appropriate use of personal protective equipment and antidotes, and the correct methods of decontamination.				2
				Total		20
4	Specific Characteristics Class 2	4.2 The specific characteristics held by substances in class 2, and in particular:	By means of class room instruction, class participation, the use of illustrative examples, a suitable video recording or live demonstrations under safe conditions, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the ability retain knowledge and to apply to the role of a driver:		1.5	
		4.2.1 The appropriate hazard warning signs				1
		4.2.2 The fact that gases may be compressed, liquefied, dissolved under pressure or refrigerated, or a combination of more than one of these methods, and the reasons for this				3
		4.2.3 The effects of failure of containment				2
		4.2.4 The correct methods for handling gas cylinders				1
		4.2.5 The effects of very low temperatures on human tissue and other materials, and the precautions which need to be taken				1
		4.2.6 Flash point, auto-ignition temperature, flammability limits, and liquid to vapour volume ratios				1
		4.2.7 The characteristics and cause of Boiling Liquid Expanding Vapour Explosion.				1
				Total	1.5	10
4	Specific Characteristics of Class 3	4.3 The specific characteristics held by substances in class 3, and in particular:	By means of class room instruction, class participation, the use of		1.5	
		4.3.1 The appropriate hazard warning sign				1

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		4.3.2 Flash point, auto-ignition temperature, flammability limits and liquid to vapour volume ratio	illustrative examples, a suitable video recording or live demonstrations under safe conditions, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the ability retain knowledge and to apply to the role of a driver			6
		4.3.3 The significance of the fact that flammable liquids are almost always lighter than water				-
		4.3.4 That the vapours of flammable liquids are almost always colourless and heavier than air, and the application of this to the work place				3
				Total	1.5	10
4	Specific Characteristics Class 4	4.4 The specific characteristics held by substances in class 4, and in particular:	By means of class room instruction, class participation, the use of illustrative examples, a suitable video recording or live demonstrations under safe conditions, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the ability to retain knowledge and apply to the role of a driver.		0.5	
		4.4.1 The appropriate hazard warning signs				1
		4.4.2 That this class consists of flammable solids, spontaneously combustible substances, and substances which, in contact with water, emit flammable gases				4
		4.4.3 The significance of Self Accelerating Decomposition Temperature, the needs and methods of temperature control, and the drivers' responsibilities in relation to control temperature and emergency temperature.				3
				Total	0.5	8
4	Specific Characteristics Class 5	4.5 The specific characteristics held by substances in class 5, and in particular:	By means of class room instruction, class participation, the use of		0.5	

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		4.5.1 The appropriate hazard warning signs	illustrative examples, a suitable video recording or live demonstrations under safe conditions, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the ability to retain knowledge and apply to the role of a driver.			-
		4.5.2 The effects of oxidation on combustion, even in the absence of air, and the significance of these effects on flammability, fires and fire fighting. That the effects of oxidation may be delayed				3
		4.5.3 That organic peroxides have combustible elements (carbon and hydrogen) and oxygen in the same molecule, and the significance of this in terms of flammability, stability, and potential explosions				2
		4.5.4 The significance of Self Accelerating Decomposition Temperature, the needs and methods of temperature control, and the drivers' responsibility in relation to control temperature and emergency temperature.				3
				Total	0.5	8
4	Specific Characteristics Class 6	4.6 The specific characteristics held by substances in class 6, and in particular:	By means of class room instruction, class participation, the use of illustrative examples, a suitable video recording or live demonstrations under safe conditions, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the		0.5	
		4.6.1 The appropriate hazard warning signs				1
		4.6.2 The definitions of the two divisions which make up class 6				1
		4.6.3 That entry to the body may be through inhalation, ingestion or absorption				3

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		4.6.4 That the effects of toxicity may be either chronic or acute	ability to retain knowledge and apply to the role of a driver.			1
		4.6.5 The need to segregate class 6 substances from foodstuffs				-
		4.6.6 Environmental contamination, the need for rapid decontamination and the use of antidotes.				2
				Total	0.5	8
4	Specific Characteristics Class 8	4.7 The specific characteristics held by substances in class 8, and in particular:	By means of class room instruction, class participation, the use of illustrative examples, a suitable video recording or live demonstrations under safe conditions, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the ability to retain knowledge and apply to the role of a driver.		0.5	
		4.7.1 The appropriate hazard warning sign				-
		4.7.2 That corrosive substances have a strong chemical reaction with a wide range of materials in which those materials are usually eroded away				2
		4.7.3 That the class consists mainly of acids and alkalis which, although “chemical opposites”, have very similar corrosive effects				-
		4.7.4 That the effects of corrosives on many materials, including human tissue, may be delayed, and that the rate of reaction may depend on concentration and temperature				2

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		4.7.5 That corrosives may react violently, with the production of heat, with water and neutralising agents, and the significance of this in the treatment of spillage and contamination.				4
				Total	0.5	8
4	Specific Characteristics Class 9	4.8 The specific characteristics held by substances in class 9, and in particular,	By means of class room instruction, class participation, the use of illustrative examples, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of , and the ability to retain knowledge and to apply to the role of a driver:		0.5	
		4.8.1 The appropriate hazard warning sign				1
		4.8.2 That class 9 consists of substances which do not clearly meet the criteria of any other class, and that the characteristics of each substance will be found in the instructions in writing				4
		4.8.3 The principle examples of substances in this class, and their characteristics				3
				Total	0.5	8
				Serial 4 Total	7.5	80
5	Initial Course Individual Class Modules Class 2	5.1 The characteristics of the three divisions of substances in class 2, the preventative and safety measures appropriate to the types of hazard involved, labelling and marking to indicate danger, the significance to the driver in the course of normal duties, and in particular:	By means of class room instruction, class participation, the use of illustrative examples, a suitable video recording or live demonstrations under safe conditions, appropriate visual aids, and confirmation using questions, to inculcate a		2	
		5.1.1 The appropriate hazard warning signs				1

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		5.1.2 Why gases need to be compressed, liquefied, dissolved under pressure, refrigerated, or a combination of these	knowledge of, and the ability to retain knowledge and apply to the role of a driver:			3
		5.1.3 The sources of information about these substances, their dangers and the precautions to be exercised when transporting them				1
		5.1.4 The need for containment, the prevention of escape, and the effects of failure in containment of gases in their various states				2
		5.1.5 The other possible hazards of gases, including toxicity, flammability, explosiveness, corrosivity, oxidation, asphyxiation and the effects of low temperature				1
		5.1.6 The effects of very low temperatures on human tissue and other materials, and the precautions which need to be taken				1
		5.1.7 The need for care in handling containers of gas, particularly during loading and unloading, and the correct methods for handling gas cylinders				1
		5.1.8 The need to avoid the dangers of containers overheating				1
		5.1.9 The need to segregate gases from certain other substances				1

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		5.1.10 Flash point, auto-ignition temperature, flammability limits, and liquid to vapour volume ratios				1
		5.1.11 The characteristics and cause of Boiling Liquid expanding Vapour Explosion				1
		5.1.12 The appropriate use of personal protective equipment				1
				Total	2	15
5	Initial Course Individual Class Modules Class 3	5.2 The characteristics of substances in class 3, the preventive and safety measures appropriate to the types of hazard involved, labelling and marking to indicate danger, the significance to the driver in the course of normal duties, and in particular:	By means of class room instruction, class participation, the use of illustrative examples, a suitable video recording or live demonstrations under safe conditions, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the ability to retain knowledge and apply to the role of a driver:		2	
	5.2.1 The appropriate hazard warning sign	1				
	5.2.2 That it is vapours, and not liquids that burn, and that the more volatile the liquid is, the greater the danger	2				
	5.2.3 The sources of information about these substances, their dangers and the precautions to be exercised when transporting them	0-1				
	5.2.4 The need to segregate flammable liquids from certain other substances	0-1				
	5.2.5 The other possible hazards of flammable liquids, including toxicity, corrosivity and asphyxiation	2-3				
	5.2.6 That the vapours of flammable liquids are usually colourless and heavier than air, and the significance of these facts to the fire and asphyxiant dangers which they pose	2				

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		5.2.7 Flash point, auto-ignition temperature, flammability limits, and liquid to vapour volume ratios				1
		5.2.8 The significance of miscibility or immiscibility and specific gravity to the hazards posed, and to fire fighting				2
		5.2.9 That it is the combination of vapour, air and ignition source which creates a fire hazard, and the importance of avoiding the exposure of vapours to all sources of ignition, including vehicle components (and the consequent need for good maintenance), sparks, naked flames, hot surfaces, electrical equipment, smoking, and static electricity				2
		5.2.10 The need to contain vapours				1
		5.2.11 The appropriate use of personal protective equipment				1
				Total	2	15
5	Initial Course Individual Class Modules Class 4	5.3 The characteristics of substances in chemical class 4, the preventive and safety measures appropriate to the types of hazard involved, labelling and marking to indicate danger, the significance to the driver in the course of normal duties, and in particular:	By means of class room instruction, class participation, the use of illustrative examples, a suitable video recording or live demonstrations under safe conditions, appropriate visual aids,		1	
		5.3.1 The appropriate hazard warning signs				1

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		5.3.2 That this class consists of flammable solids, substances liable to spontaneous combustion and substances which, on contact with water emit flammable gases, and the significance of these sub-divisions to the packaging and transport of the substances in this class	and confirmation using questions, to inculcate a knowledge of, and the ability to retain knowledge and apply to the role of a driver:			2
		5.3.3 The need for containment, prevention of escape, or exposure to situations giving rise to hazards, and the action to be taken in the event of such circumstances arising				1
		5.3.4 The need for substances in this class to be segregated from certain other materials				0-2
		5.3.5 The fact substances in class 4 may have subsidiary hazards, such as toxicity, corrosivity and explosiveness				0-1
		5.3.6 The significance of Self Accelerating Decomposition Temperature, the need and methods of temperature control, and the drivers' responsibilities in relation to control temperature and emergency temperature				2-3
		5.3.7 The need to avoid overheating substances or causing them to ignite, including avoidance of sources of ignition				1
		5.3.8 The appropriate use of personal protective equipment and antidotes.				1

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
5	Initial Course Individual Class Modules Class 5	5.4 The characteristics of substances in class 5, the preventative and safety measures appropriate to the types of hazard involved, labelling and marking to indicate danger, the significance to the driver in the course of normal duties, and in particular:	By means of class room instruction, class participation, the use of illustrative examples, a suitable video recording or live demonstrations under safe conditions, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and to retain knowledge and apply to the role of a driver:		1	
		5.4.1 The appropriate hazard warning signs				1
		5.4.2 That this class consists of oxidising substances and organic peroxides, and the significance of these sub-divisions to the packaging and transport (including vehicle requirements) of the substances in this class				1
		5.4.3 The need for containment and the prevention of escape through correct packaging and careful handling				1
		5.4.4 The need for substances in this class to be segregated from certain other materials				1
		5.4.5 The fact that substances in this class may have subsidiary hazards, including flammability, explosion and corrosivity				1
		5.4.6 The need to avoid overheating some of these substances, or causing them to be exposed to sources of ignition				1
		5.4.7 The effects of oxidation on combustion, even in the absence of air, and the significance of these effects (including delayed effects) on flammability, fires and fire fighting				1

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		5.4.8 That organic peroxides have combustible elements (carbon and hydrogen) and oxygen in the same molecule, and the significance of this in terms of flammability, stability and potential explosives				1
		5.4.9 The significance of Self Accelerating Decomposition Temperature, the need and methods of temperature control, and the drivers' responsibilities in relation to control temperature and emergency temperature				1
		5.4.10 The appropriate use of personal protective equipment, and the specific dangers of class 5.2 in relation to damaging eyes.				1
				Total	1	10
5	Initial Course Individual Class Modules Class 6	5.5 The characteristics of substances in class 6, the preventive and safety measures appropriate to the types of hazard involved, labelling and marking to indicate danger, the significance to the driver in the course of normal duties, and in particular:	By means of class room instruction, class participation, the use of illustrative examples, a suitable video recording or live demonstrations under safe conditions, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and to retain knowledge and apply to the role of a driver:		1	
	5.5.1 The appropriate hazard warning signs			1		
	5.5.2 That this class consists of toxic and infectious substances, and the significance of these sub-divisions to the special packaging rules and transport of materials in this class			1		
	5.5.3 The need for containment, prevention of escape, or exposure to situations giving rise to hazards, and the action to be taken in the event of such circumstances arising			1		

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		5.5.4 The need for materials in this class to be segregated from certain other materials, and in particular from foodstuffs				-
		5.5.5 The fact that materials in class 6 may have subsidiary hazards, such as flammability and corrosivity				1
		5.5.6 That entry to the body may be through inhalation, ingestion or absorption				1
		5.5.7 That the effects of class 6 materials may either be acute or chronic, and the significance of the difference between the two				1
		5.5.8 That there is a particular need for the prevention of environmental contamination				2
		5.5.9 The appropriate use of personal protective equipment and antidotes, and in particular the donning and removal of protective clothing in such a manner as to avoid contamination				1
		5.5.10 The need for rapid decontamination and/or the use of an antidote in the event of exposure.				1
				Total	1	10
6	Initial Course Individual Class Modules Class 8	5.6 The characteristics of substances in class 8, the preventive and safety measures appropriate to the types of hazard involved, labelling and marking to indicate danger, the significance to the driver in the course of normal duties, and in particular:	By means of class room instruction, class participation, the use of illustrative examples, a suitable video recording or live demonstrations under safe conditions, appropriate visual aids,		1	
		5.6.1 The appropriate hazard warning sign				0

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		5.6.2 That corrosive substances have a strong chemical reaction with a wide range of materials in which those materials are usually eroded away	and confirmation using questions, to inculcate a knowledge of, and to retain knowledge and apply to the role of a driver:			2
		5.6.3 The significance of the characteristics of corrosive substances to packaging, handling and safe transportation				1
		5.6.4 The need for containment, prevention of escape, or exposure to situations giving rise to hazards, and the action to be taken in the event of such circumstances arising				2
		5.6.5 The need for substances in this class to be segregated from certain other materials				-
		5.6.6 The fact that substances in class 8 may have subsidiary hazards, such as toxicity, flammability and oxidising				2
		5.6.7 That the class consists mainly of acids and alkalis which, although “chemical opposites”, have very similar corrosive effects				-
		5.6.8 That the effects of corrosives on many materials, including human tissue, may be delayed, and that the rate of reaction may depend on concentration and temperature				1
		5.6.9 The corrosives may react violently, with the production of heat, with water and neutralising agents, and the significance of this in the treatment of spillage and contamination				1
		5.6.10 The appropriate use of personal protective equipment				-

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		5.6.11 The importance of rapid neutralisation and/or decontamination following spillage or contamination.				1
				Total Class 8	1	10
5	Initial Course Individual Class Modules Class 9	5.7 The characteristics of substances in class 9, the preventive and safety measures appropriate to the types of hazard involved, labelling and marking to indicate danger, the significance to the driver in the course of normal duties, and in particular:	By means of class room instruction, class participation, the use of illustrative examples, a suitable video recording or live demonstrations under safe conditions, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and to retain knowledge and apply to the role of a driver:		1	
	5.7.1 The appropriate hazard warning sign	1				
	5.7.2 That class 9 consists of substances which do not clearly meet the criteria of any other class, and that the characteristics of each substance will be found in the instructions in writing	2				
	5.7.3 The need for containment, prevention of escape, or exposure to situations giving rise to hazards, and the action to be taken in the event of such circumstances arising	1				
	5.7.4 The need for substances in this class to be segregated from certain other materials	1				
	5.7.5 The principle examples of substances in this class, and their characteristics	3				
	5.7.6 The appropriate use of personal protective equipment	2				
				Total Class 9	1	10
				Total Individual Modules Route	9	80

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
6	Initial Course Tanker Specialisation	<p>6.1 The specific additional provisions applicable to the use of tankers and tank containers, and in particular:</p> <p>6.1.1 The definitions of tankers and tank containers in terms of construction and size</p> <p>6.1.2 The responsibilities of employers to provide training on specific vehicles, specific equipment and mechanisms, and with specific loads</p> <p>6.1.3 The national and international requirements for tankers, tank containers and vehicles to be inspected and certified, the documentation and plating of vehicles, and the information displayed on the data plate</p> <p>6.1.4 The general application of national and international (ADR, IMDG, RID) requirements, Approved Codes of Practice and the HAZCHEM List to the operation of tanks and tank containers</p> <p>6.1.5 The requirements for vehicles to carry fire extinguishers and other safety equipment.</p> <p>6.1.6 The requirement for vehicles to carry documentation, including instructions in writing about the load, Vocational Training Certificate (VTC), transport documentation, “Certificate of Approval and MOT Certificate.</p> <p>6.1.7 The safety precautions to be taken in the course of loading, unloading and during the journey, including segregation of loads, checks of the vehicle and load including the secure fastening of containers, restrictions on smoking and the use of certain equipment.</p>	By means of class room instruction, class participation, the use of illustrative examples, a video recording demonstrating the possible effects of load movement or unsafe driving, other appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the ability to retain knowledge and apply to the role of a driver:		3	7

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		<p>6.1.8 Vehicle security, supervision and parking rules, both national and international, and the parking of detached trailers.</p> <p>ix. The national and international rules for carriage, documentation required and disposal of wastes in tanks and tank containers.</p> <p>6.1.9 The national and international rules for carriage, documentation required and disposal of wastes in tanks and tank containers.</p> <p>6.1.10 The UK Hazard Information System, the layout and content of Hazard Warning Panels, emergency action codes, the number and positioning of panels on tankers and tank containers, for both single and multiple loads and the voluntary scheme for low hazard substances.</p> <p>6.1.11 Placarding and marking of tankers and tank containers under the IMDG code for journeys by sea (including those to islands off the UK mainland), the number, positioning and use of placards for primary and subsidiary risks and for single and multiple loads, proper shipping names, UN numbers and marine pollutant labels, and resistance to sea water.</p> <p>6.1.12 Placarding and marking of tankers and tank containers under ADR, the size, layout and content of orange coloured plates, hazard identification numbers, fire resistance, positioning and use of placards.</p>				

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		6.1.13 The relationship of UK, IMDG and ADR codes.				
		6.1.14 The responsibilities of carriers under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations, the need for drivers to provide information, and the occurrences that need to be reported in relation to tanker operations.				
		6.2 The specific requirements of the vehicles, and specifically:	By means of class room instruction, class participation, the use of illustrative examples, a video recording demonstrating the possible effects of load movement or unsafe driving, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the ability to retain knowledge and apply to the role of a driver:		2	5
	6.2.1 The types of loads for which tanks and tank containers may be designed, including liquefied petroleum gas, flammable liquids, gases transported at very low temperatures, powders and granules, insulated or heated loads, refrigerated loads, foodstuffs (e.g. certain alcoholic beverages), corrosive substances, and wastes.					
	6.2.2 The materials from which tanks and tank containers may be constructed, including stainless steel, mild steel, aluminium, nickel, fibre reinforced plastic, and the various linings which may be used.					
	6.2.3 The construction of tanks and tank containers; “atmospheric” and pressure tanks, compartments and baffles.					

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		<p>6.2.4 The application of regulations concerning the construction and approval of tanks and vehicles, including stipulations regarding engines and fuel systems, exhausts, electrical systems, stability, rear end projection, fire resistant cabs, and ullage space.</p> <p>6.2.5 The ADR requirements for maximum filling ratios and when minimum filling ratios apply.</p> <p>6.2.6 The significance to the loading, unloading and transport of materials of the Maximum Allowable Working Pressure.</p> <p>6.2.7 The fitting and use of sun shields.</p>				

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		6.2.8 The purpose, operation, precautions and drivers' responsibilities in relation to items of equipment, including: <ul style="list-style-type: none"> - man lids, seals and bolts - dip sticks - pressure relief, and pressure & vacuum relief valves - bursting discs - flame traps and gauzes - fusible elements - pressure connections and pressure gauges - temperature gauges - outlet valves and manifolds, and valve controls - seals - hoses, hose connections and blanking caps - emergency shut off valves - excess flow valves 				
		6.3 The procedures to be followed in relation to the operation of tanks and tank containers, and in particular:	By means of class room instruction, class participation, the use of		2	5

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		<p>6.3.1 Loading vehicles, including the responsibilities of the driver for obeying site rules, reporting to a responsible person, locating emergency equipment, obtaining instructions in writing, securing the vehicle against accidental movement, ensuring that the correct substance is loaded and that the tank is suitable for the load, ensuring that there is sufficient capacity for the load, taking precautions against contamination of the load, using the appropriate personal protective equipment, earthing the vehicle and taking appropriate action in case of danger or an electrical storm, ensuring that the vehicle is not overloaded and that there is adequate ullage space, controlling the rate of filling, and taking all necessary precautions against fire or explosion</p> <p>6.3.2 Checks during the journey, including ensuring that hoses are secured and have blanking caps in place, that there are no leaks, that components are not overheating, that all documentation is available, and that vehicle markings are in place, clean and clearly visible</p>	<p>illustrative examples, a video recording demonstrating the possible effects of load movement or unsafe driving, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the ability to retain knowledge and apply to the role of a driver:</p>			

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		6.3.3 Unloading vehicles, including the drivers' responsibility for: reporting to the person in charge, following site rules, locating the emergency equipment, using the appropriate personal protective equipment, ensuring that the load is discharged into the correct tank, and that there is sufficient space for it, providing a sample of the load if required, making the correct connections, taking precautions against accidental movement, fire or explosion or implosion due to the formation of a vacuum, and following the correct procedures for unattended driver discharge or attended driver discharge including obtaining a certificate from a responsible person.				
		6.3.4 The causes and effects of Boiling Liquid Expanding Vapour Explosions				
		6.3.5 The causes of static electricity, and the specific precautions to be taken to avoid its dangers, including the use of anti-static and non-sparking tools and clothing				
		6.3.6 The avoidance of overloading and overfilling, including the use of dipsticks, ullage bars, sight glasses, gauges, meters and weigh-bridges				
		6.3.7 The cleaning and purging of tanks and ancillary equipment, e.g. pumps, hoses etc, including the driver's individual responsibilities; techniques, precautions (with particular reference to tank entry), avoidance of implosion, and compliance with COSHH				

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		6.3.8 Using appropriate routes, avoiding built up areas, low bridges and routes with restrictions relating to the transport of dangerous goods.				
		6.4 A general theoretical knowledge of the various and different loading and discharge systems, and specifically:			2	3
		6.4.1 Closed and open systems				
		6.4.2 Loading and discharging using gravity or pumps, including the use of pumps or compressors either on the vehicle or external to it				
		6.4.3 The use of tipping tanks, including the use of pressure, use of stabilising legs, precautions in high winds, and the dangers of sticking loads				
		6.4.4 The use of the prime mover engine to drive, through power take off, a pump or compressor, and the proper control of engine speed				
		6.4.5 Decompression before disconnection, and the avoidance of implosion				
		6.4.6 Discharge by pump, including pump priming				
		6.4.7 The correct connection of hoses, pumps and syphons, and the correct sequence for valve opening				
		6.4.8 The specific precautions to be taken when loading and unloading dangerous substances (top discharge), LPG, cryogenic gases and dangerous wastes.				

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		6.5 The behaviour of vehicles, tankers and tank containers on the road, including movements of the load, and in particular:			1	-
		6.5.1 Surge during braking and acceleration, and the need for the driver to anticipate and acclimatise				
		6.5.2 The need for clutch control and appropriate braking techniques, with and without ABS				
		6.5.3 Lateral movement due to sudden steering manoeuvres				
		6.5.4 The roles and limitations of baffles and rules on minimum loading ratios				
		6.5.5 The responsibility of the driver to avoid danger, jack-knifing and roll-over by anticipation, smooth driving and the control of speed.				
				Total	10	20
7	Initial course Class 1 Specialisation	7.1 The definition of explosives, and the classification of explosives into Divisions and Compatibility Groups, and in particular:	By means of class room instruction, class participation, the use of illustrative examples, a suitable video recording, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the ability to retain knowledge and apply to the role of a driver:		2	5
		7.1.1 The distinctive characteristics of an explosive				
		7.1.2 Detonations, shock waves, deflagrations and pyrotechnics				
		7.1.3 The Class 1 Divisions, the hazards of each Division, and examples of each division. Unclassified explosives				
		7.1.4 The Compatibility Groups, examples from each Group, the rules relating to mixed loads, and the allocation of responsibilities				

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		7.1.5 Prohibitions on the carriage of certain loads (e.g. Group K)				
		7.1.6 Definitions of “substance”, “article”, and Net Mass of Explosive				
		7.2 The packaging and labelling of explosives, including:	By means of class room instruction, class participation, the use of illustrative examples, a suitable video recording, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the ability to retain knowledge and apply to the role of a driver:		1	4
		7.2.1 The regulations governing packaging and labelling				
		7.2.2 UN approved packaging scheme				
		7.2.3 Labelling requirements for inner packaging, outer packaging and unit loads				
		7.2.4 Checking packages and containers for soundness and security				
		7.2.5 Placarding and marking of vehicles and containers.				
		7.2.6 Labelling for subsidiary hazards.				
		7.2.7 The relationships between UK regulations, the IMDG code and ADR.				
		7.3 The loading, unloading and carriage of explosives, and specifically:	By means of class room instruction, class participation, the use of illustrative examples, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the ability to retain knowledge and apply to the role of a driver:		3	11
		7.3.1 The responsibilities of consignors, carriers and drivers.				
		7.3.2 The types of vehicles permitted to carry explosives, their characteristics and construction.				
		7.3.3 Maximum permitted loads by type of vehicle.				
		7.3.4 Preparation of vehicles for loading and the loading procedures.				
		7.3.5 Stowage, segregation and load security.				

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		7.3.6 Documentation, including instructions in writing, Vocational Training Certificate (VTC), consignment notes, emergency instructions (N.B. language requirements), and description of materials.				
		7.3.7 Requirements for vehicle equipment, including fire extinguishers.				
		7.3.8 Restrictions on smoking and the carriage of sources of ignition.				
		7.3.9 Prohibitions, including certain explosives, passengers, and certain mixed loads				
		7.3.10 Selection of routes, and liaison with the police				
		7.3.11 The frequency of stops, and checks to be made before leaving and during stops				
		7.3.12 The requirement for attendants for single vehicles and in convoy, and the qualifications of an attendant				
		7.3.13 Distances from other vehicles during journeys				
		7.3.14 Vehicle parking and supervision				
		7.3.15 Vehicle breakdowns and restrictions on repairs				
		7.3.16 The need for completion without delay, and action in the case of non-delivery				
		7.3.17 The prevention of fire on or near a vehicle and protection against accidental initiation of explosives which are sensitive to electro-magnetic radiation				
		7.3.18 The need for load security, and the measures adopted				

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		7.3.19 Enforcement by the Health and Safety Executive				
		7.4 The safe and correct loading of a vehicle with various packages of explosives, with due regard to the use of mechanical handling, cleanliness of the vehicle, minimising load height, weight distribution, load restraint and the avoidance of friction.	By means of instruction, followed by an exercise based on a written scenario and completed individually, demonstrate the ability to perform correctly:	To satisfy an experienced and competent instructor that the candidate has the ability to take into account all of the factors affecting the safe stowage of a variety of packages, with due regard for all of the regulations, and the need to safeguard the driver and all others.	1	Nil
		7.5 The special measures to be taken in the event of an accident or incident involving a vehicle carrying explosives, including clear and prompt communication with the emergency services and the operator, fire prevention and dealing with fires in the vehicle and the load, assessment of the incident, dealing with the public, and evacuation, including “safe distances” and hard cover.	By means of instruction, followed by an exercise based on a written scenario and completed individually, demonstrate the ability to perform correctly:	To satisfy an experienced and competent instructor that the candidate has the ability to take into account all of the factors affecting the safe stowage of a variety of packages, with due regard for all of the regulations, and the need to safeguard the driver and all others.	1	Nil
				Total Class 1	8	20
8	Initial Course Class 7	8.1 Specific hazards related to ionising radiation, and in particular:	By means of class room instruction, class		2	5

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
	Specialisation	<p>8.1.1 How radioactive materials decay, and the significance for packaging and personal protection of the different forms of radiation and sub hazards. The concept of background radiation.</p> <p>8.1.2 The effects of radiation on human tissue, including long and short term and genetic effects, and the significance of this to the precautions to be taken</p> <p>8.1.3 The concept of radiation dose, and the use of personal dosimeters (film badges)</p> <p>8.1.4 The Ionising Radiation Regulations, and operating within the rules which may apply to a controlled area</p> <p>8.1.5 The fact that radioactive materials may have other harmful effects, including toxicity, corrosivity, flammability and oxidising, and the significance of these effects in transporting the materials.</p>	<p>participation, the use of illustrative examples, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the ability to retain knowledge and to apply to the role of a driver:</p>			
		<p>8.2 Specific requirements concerning packing, handling, mixed loading and stowage of radioactive materials, and in particular:</p> <p>8.2.1 The various methods of radiation protection, including time (i.e. limiting exposure), distance, shielding and hygiene</p> <p>8.2.2 The other modal regulations applying to the transport of radioactive materials</p> <p>8.2.3 The responsibilities of consignors, carriers and drivers in relation to packaging, labelling, documentation, vehicle marking, and supervision</p>	<p>By means of class room instruction, class participation, the use of illustrative examples, appropriate visual aids, and confirmation using questions, to inculcate a knowledge of, and the ability to retain knowledge and to apply to the role of a driver:</p>		4	15

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		8.2.4 The placarding and marking of vehicles, ISO Containers, Tank Containers and Tankers				
		8.2.5 The methods and standards of packaging radioactive materials, including “excepted”, “industrial”, “Type A”, “special form”, the various “Type B” packaging and “Type C”.				
		8.2.6 The Package Radiation Categories I, II and III, the Transport Index, the Criticality Safety Index, the maximum limits for individual packages and vehicle loads, and the concept of exclusive use.				
		8.2.7 Loading and unloading vehicles, the need to segregate certain materials, and the need for minimum handling.				
		8.2.8 Suitability of vehicles, and the limitations imposed on some vehicle types, including passenger vehicles. Vehicle equipment.				
		8.2.9 The actions to be taken during a journey, including checks before setting out, checks during the journey, supervision and parking (including dealing with the public) carriage of passengers, and breakdown procedures.				
		8.3 The special measures to be taken in the event of an accident involving a vehicle carrying radioactive materials, including the avoidance of contamination, the need not to leave the vehicle unattended, contacting the emergency services, the carriers’ emergency provisions, the purpose and function of the NAIR scheme, and personal decontamination under specialist supervision.	By means of instruction, followed by exercises based on written scenarios and completed individually, demonstrate the ability to perform correctly:	To satisfy an experienced and competent instructor that the actions to be taken in the case of an accident or incident will be the most appropriate under the given circumstances.	1	Nil

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		8.4 The safe and correct stowage of a variety of packages containing radioactive materials in a vehicle body.	By means of instruction, followed by exercises based on written scenarios and completed individually, demonstrate the ability to perform correctly:	To satisfy an experienced and competent instructor that the candidate has the ability to take into account all of the factors affecting the safe stowage of a variety of packages, with due regard for all of the regulations, and the need to safeguard the driver and all others.	1	Nil
				Total Class 7	8	20
9	Refresher Course General Core Requirements	9.1 The general requirements governing the carriage of dangerous goods. 9.2 The main hazards of substances in Classes 2, 3, 4, 5, 6, 8 and 9. 9.3 Information on environmental protection in control of the transfer of wastes. 9.4 What a driver should do and not do in the carriage of dangerous goods, including Behaviour in Tunnels and vehicle and load security 9.5 The purpose and method of operation of technical equipment in use on vehicles, including emergency equipment. 9.6 The prohibitions on mixed loading in the same vehicle or container. 9.7 Precautions to be taken during the loading and unloading of dangerous goods. 9.8 General information concerning civil liability.	By means of revision, discussion and questions to review the requirements of the syllabus, and to ensure that the certificate holder has an understanding of:		2	For a detailed breakdown of the numbers of questions, see the equivalent serial in the initial syllabus

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		9.9 Information on multi-modal transport operations, the interrelation of road/rail/sea regulations, and operations at points of interchange.				
		9.10 All new technical, legal and substance-related developments in the period since the drivers were last trained.				
				Total	2	

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
10	Refresher Course Practical Exercises	<p>What to do after an accident (first aid, road safety, basic knowledge about the use of protective equipment, etc), and in particular;</p> <p>10.1 The types of personal protective equipment available to drivers, and the particular uses and limitations of each type. Guidance on when the equipment should be worn. A demonstration or audio/visual presentation of the safest way to don and remove personal protective equipment, and how to decontaminate it.</p> <p>Equipment to be covered must be a minimum of hard hat, suitable goggles, visors, gloves, respirators and filters, chemical suit, high visibility jacket or vest, and protective footwear.</p> <p>10.2 The general action to be taken in an emergency involving a potential or actual spillage or release of dangerous materials, during loading, unloading and carriage, and the existence of specific national emergency instructions.</p>	<p>By means of revision, discussion and questions to review the requirements of the syllabus, and to ensure that the certificate holder has an understanding.</p> <p>By means of revision and an update on recent changes, followed by an exercise based on a written scenario and completed individually.</p>	<p>To satisfy an <u>experienced and competent instructor</u> that the actions which the candidate will take in the case of an accident or incident will be the most appropriate under the given circumstances.</p>	4 (in total)	For a detailed breakdown of the numbers of questions, see the equivalent serial in the initial syllabus

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		<p>10.2 (cont) What to do in an incident or accident in order to ensure personal safety and that of the public, including:</p> <ul style="list-style-type: none"> - Informing and co-operating with emergency services - Minimising the consequences of the accident/incident - Warning and protecting the public - Ensuring personal safety - Using and safeguarding instructions in writing - Attending to the injured - Preventing the escape of hazardous materials, and contamination, including entry into drains and water courses - Dangers in confined spaces - Informing the operator 	<p>By means of revision and an update on recent changes, followed by an exercise based on a written scenario and completed individually.</p>	<p>To satisfy an <u>experienced and competent instructor</u> that the actions which the candidate will take in the case of an accident or incident will be the most appropriate under the given circumstances.</p>		

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		<p>10.3 The administration of basic emergency first aid techniques, including assessment of the situation, the need to protect oneself and other people, care of the unconscious casualty, control of bleeding, emergency treatment of burns, and treatment of chemical contamination, including the use of eye wash.</p> <p>Assessment of the unconscious casualty and the situation in which the casualty is found, checking response and breathing, opening the airway, performing external chest compression, rescue breaths and placing the casualty in the recovery position.</p> <p>The instruction of the subjects must be in the following order;</p> <ol style="list-style-type: none"> 1. Contamination 2. Bleeding 3. CPR 	By means of revision, update on recent changes, and demonstration, using a suitable resuscitation model.	To satisfy a <u>qualified and competent instructor</u> of the candidates understanding of the required actions in accordance with the latest and commonly accepted practice.		
		10.4 The nature of fire and the fire triangle, the importance of good practice and vehicle maintenance in fire prevention, how to extinguish or control tyre fires, the correct identification, selection and uses of the various types of fire extinguishers, how to use a fire extinguisher to put out a fire, and the associated risks of fires, including the release of dangerous gases and particles.	By means of instruction and revision, an update on recent changes, and demonstration, using examples of fire extinguishers and a <u>suitable video</u> .	To satisfy an <u>experienced and competent instructor</u> of the candidates understanding of the required actions in accordance with latest and commonly accepted practice.		
				Total:	4	

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
11	Refresher Course Packages Core Requirements	<p>11.1 The scope and application of national and international rules for the carriage of dangerous goods in packages and in bulk, including Packing Groups, Transport Categories, the definitions of “in scope” loads, exemptions by reason of limited quantities and size of load.</p> <p>11.2 The UN packaging scheme, including its testing, certification and application to national and international transport.</p> <p>11.3 The purposes and types of the various packages containers and bulk carriers in use and their main characteristics, including the need for integrity, durability, containment and pressure retention under conditions of normal use.</p> <p>11.4 The loading and unloading of vehicles, associated procedures including vehicle selection, correct stowage, securing the load, protecting the load, checking for and dealing with leakers, dealing with spillage, and the segregation of incompatible materials.</p> <p>11.5 The operating procedures specific to packaged goods and bulk loads to be followed through both national and international journeys, including documentation, vehicle marking, parking rules and equipment required to be carried on vehicles, including fire extinguishers and their inspection dates.</p> <p>11.6 All new technical, legal and substance-related developments in the period since the drivers were last trained.</p>	By means of revision, discussion and questions to review the requirements of the syllabus, and to ensure that the certificate holder has an understanding of:		2	For a detailed breakdown of the numbers of questions, see the equivalent serial in the initial syllabus

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
				Total	2	
12	Refresher Course Class Requirements Class 2	12.1 The characteristics of substances in Class 2, the preventive and safety measures appropriate to the types of hazard involved, labelling and marking to indicate danger, any recent changes, and the significance to the driver in the course of normal duties.	By means of revision, discussion and questions to review the requirements of the syllabus, and to ensure that the certificate holder has an understanding of:		4	For a detailed breakdown of the numbers of questions, see the equivalent serial in the initial syllabus
	Refresher Course Class Requirements Class 3	12.2 The characteristics of substances in Class 3, the preventive and safety measures appropriate to the types of hazard involved, labelling and marking to indicate danger, any recent changes, and the significance to the driver in the course of normal duties.				
	Refresher Course Class Requirements Class 4	12.3 The characteristics of substances in Class 4, the preventive and safety measures appropriate to the types of hazard involved, labelling and marking to indicate danger, any recent changes, and the significance to the driver in the course of normal duties.				
	Refresher Course Class Requirements Class 5	12.4 The characteristics of substances in Class 5, the preventive and safety measures appropriate to the types of hazard involved, labelling and marking to indicate danger, any recent changes, and the significance to the driver in the course of normal duties.				

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
	Refresher Course Class Requirements Class 6	12.5 The characteristics of substances in Class 6, the preventive and safety measures appropriate to the types of hazard involved, labelling and marking to indicate danger, any recent changes, and the significance to the driver in the course of normal duties.				
	Refresher Course Class Requirements Class 8	12.6 The characteristics of substances in Class 8, the preventive and safety measures appropriate to the types of hazard involved, labelling and marking to indicate danger, any recent changes, and the significance to the driver in the course of normal duties.				
	Refresher Course Class Requirements Class 9	12.7 The characteristics of substances in Class 9, the preventive and safety measures appropriate to the types of hazard involved, labelling and marking to indicate danger, any recent changes, and the significance to the driver in the course of normal duties.				
				Total	4	
13	Refresher Course Tankers Specialisation	13.1 The specific additional provisions and regulations applicable to the use of tankers and tank containers.	By means of revision, discussion and questions to review the requirements of the syllabus, and to ensure that the certificate holder has an understanding of:		2	For a detailed breakdown of the numbers of questions, see the equivalent serial in the initial syllabus
13.2 The specific requirements of vehicles in relation to tankers and tank containers.						
13.3 The procedures to be followed in relation to the operation of tankers and tank containers.						

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		13.4 A general theoretical knowledge of the various and different loading and discharge systems.				
		13.5 The behaviour of vehicles on the road, including movements of the load.				
		13.6 All new technical, legal and substance-related developments in the period since the drivers were last trained.				
				Total	2	
14	Refresher Course Class 1 Specialisation	14.1 The definition of explosives, and the classification of explosives into Divisions and Compatibility Groups.	By means of revision, discussion and questions to review the requirements of the syllabus, and to ensure that the licence holder has an understanding of:		2	For a detailed breakdown of the numbers of questions, see the equivalent serial in the initial syllabus
	14.2 The packaging and labelling of explosives.					
	14.3 The loading, unloading and carriage of explosives.					
		14.4 All new technical, legal and substance-related developments in the period since the drivers were last trained.				
		14.5 The safe and correct loading of a vehicle with various packages of explosives, with due regard to the use of mechanical handling, cleanliness of the vehicle, minimising load height, weight distribution, load restraint and the avoidance of friction.	By means of revision, followed by an exercise based on a written scenario and completed individually, demonstrate the ability to perform correctly:	To satisfy an <u>experienced and competent instructor</u> that the candidate has the ability to take into account all of the factors affecting the safe stowage of a variety of packages, with due regard for all the regulations, and the need to safeguard the driver and all others.	0.5	

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		14.6 The special measures to be taken in the event of an accident or incident involving a vehicle carrying explosives, including clear and prompt communication with the emergency services and the operator, fire prevention and dealing with fires in the vehicle and the load, assessment of the incident, dealing with the public, and evacuation, including “safe distances” and hard cover.	By means of revision, followed by an exercise based on a written scenario which progressively introduces graduated levels of hazard, demonstrate the ability to perform correctly:	To satisfy an <u>experienced and competent instructor</u> that the actions to be taken in the case of an accident or incident will be most appropriate under the given circumstances.	0.5	
				Total	3	
15	Refresher Course Class 7 Specialisation	15.1 The specific hazards related to ionizing radiation.	By means of revision, discussion and questions to review the requirements of the syllabus, and to ensure that the certificate holder has an understanding of:		2	For a detailed breakdown of the numbers of questions, see the equivalent serial in the initial syllabus
	15.2 The specific requirements concerning packing, handling, mixed loading and stowage of radioactive materials.					
	15.3 All new technical, legal and substance-related developments in the period since the drivers were last trained.	By means of two exercises based on written scenarios, and completed individually, demonstrate the ability to perform correctly	To satisfy an <u>experienced and competent instructor</u> that the actions to be taken in the case of an accident or incident will be most appropriate under the given circumstances.	0.5		
	15.4 The special measures to be taken in the event of an accident involving a vehicle carrying radioactive materials, including the avoidance of contamination, the need not to leave the vehicle unattended, contacting the emergency services, the carriers’ emergency provisions, the purpose and function of the NAIR scheme, and personal decontamination under specialist supervision.					

Syllabus Serial	Module	Description	Outline method – see Manual of Practice for details	Standard Required – to pass the multiple choice examination, or;	Training Units	Examination Questions
		15.5 The safe and correct stowage of a variety of packages containing radioactive materials in a vehicle body.		To satisfy an experienced and competent instructor that the candidate has the ability to take into account all of the factors affecting the safe stowage of a variety of packages, with due regard for all the regulations, and the need to safeguard the driver and all others.	0.5	
				Total	3	