

Test Specification for Training Provider Examinations of Radioactive consignments

In this test specification we have split the areas to be covered in the exam in to Parts A, B, C and D

Part A – Indicates the core questions that should be asked to **every** student. (Annotated (A). In the main these questions are worth one point each.

Part B – Indicates the next part of the exam paper to be covered and is split into the two functions of Shipment or Acceptance. Annotated as B-S (indicating Part B shipment only) or B-O (indicating acceptance/Operator only. Where the item refers to both shipment and acceptance it is indicated as B-B (the latter B indicating ‘both’)

Part C - In some instances it is recognised that a different weighing might need to be applied to a more difficult question. Where this is the case we have identified the area and suggested that this is placed in a different section (in our case C) so that more points can be awarded to it and so that it can be differentiated from the others (where only one point is awarded).

Part D - Where students require a more in-depth coverage of a topic (such as greater classification knowledge or fissile materials) the examination may be extended to include a part D. Where this is the case the certificate issued should indicate the more in-depth areas covered.

A number of training providers have expressed an interest in producing multiple choice questions for Part A. The CAA wish to leave the style of paper (either long answer or multiple choice) up to the Training Providers as there may be varying degrees of competence in creating multiple choice questions and valid distractors. Other training providers may not favour this style – consequently the decision is left to the Training Providers. However, in order to try and achieve parity between the two styles the chart below has been revised to require less subsections within a single question. We have also included a column for multiple choice. This indicates the number of questions and the points to be awarded – Normally 1-1 (meaning 1 question, 1 point). However in Part C it will be noted that the weighting is slightly different and more points are awarded for the correct answer. Questions in Part C can be either long answer or multiple choice. This is indicated in the multiple choice column as “1-2” meaning 1 question, 2 points. This differs from the normal practice of awarding only 1 point per question and as such it is differentiated into a separate Part to indicate that different rules apply.

The Total number of points available and the Pass mark for the exam paper needs to be given on the student’s paper. Pass (of 75%) is required in part B (as per mainstream exam papers). Pass mark to be 75% unless Multiple choice questions are used in the core in which case the pass mark is raised to 80%

All examination Parts described above must be undertaken in the same examination session. The Exam conditions are as per the mainstream exams

Table 1 Principle Objectives for Each Training Programme

RESPONSIBILITIES OF SHIPPERS/ FREIGHT FORWARDERS FOR RADIOACTIVE MATERIAL	RESPONSIBILITIES OF ACCEPTANCE STAFF FOR RADIOACTIVE MATERIAL
<p>To know where to find and use information:</p> <p>(1) so as to prepare correctly a consignment of radioactive material for air transport;</p> <p>(2) to verify that a consignment of radioactive material has been correctly prepared for air transport.</p>	<p>To know where to find and use information on the acceptance for air transport of radioactive materials and the operator’s responsibilities for their handling and preparation for air transport.</p>

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Table 2 Objectives for Each Area of a Training Programme

Italic & Underscored text indicates the areas of training in Table 1.5A

Area of Training	Responsibilities of Shippers/ Packers and Cargo Agents for Radioactive Material <i>At the end of the session students should be able to:</i>	Responsibilities of Acceptance Staff (operators/ handling agents) for Radioactive Material <i>At the end of the session students should be able to:</i>	Exam	Level of difficulty (H/M/L)	Part	Nr of questions	Points for question Long Answer	Multiple choice Nr & points	Comments	Where in training programme?	Where in exam if required (i.e. got * in Exam column)
1.1 <u>UK Law, Applicability and General Philosophy</u>	<ul style="list-style-type: none"> Quote the title of the UK legislation on the transport of radioactive dangerous goods by air or State who the regulations apply to and their responsibilities for the transport of radioactive dangerous goods by air or state the scope and application on the transport of radioactive dangerous goods by air 		*	L	A	1	1	1-1	Choose one not covered by mainstream examination SC-added to enable inclusion IATA 10.0 (scope and radac protection prog as a number of exams contain this)		
1.2 <u>Appendix B-Nomenclature</u>	<ul style="list-style-type: none"> Convert radioactive decimal multiples of SI Units 		*	M	A	1	1	1	SC – added as many exams put in questions concerning conversions		
2. <u>Limitations</u>	State the limitations that may apply to the carriage of radioactive dangerous goods by air. Specifically										

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2.1 Forbidden under any circumstances/ unless exempted.	<ul style="list-style-type: none"> Identify which items of radioactive dangerous goods are totally forbidden and those which are forbidden unless exempted and the specific conditions under which they can be transported. 		*	L	A	1 for either area	1	1-1	Points should be given to the correct answer and not to correct reference numbers unless there is a Yes/No question where we need to be sure that the student knows where to get the info from and that it wasn't just a guess (in this case ½ point should be awarded for the Yes/No answer and ½ for the reference making up the 1 pt.		
2.2 Hidden dangerous goods	<ul style="list-style-type: none"> Identify the types of general cargo that may contain hidden radioactive material 	<ul style="list-style-type: none"> Identify the types of general cargo that may contain hidden radioactive material State the action that they need to take if they suspect that a consignment may contain hidden radioactive dangerous goods. 	No						Needs to be in training but is not considered to be an examination subject		
2.3 Pax and crew	<ul style="list-style-type: none"> Identify what DG pax and crew are permitted to take on an aircraft 		No						Needs to be in training but is not considered to be an examination subject		

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2.4 Transport by post	<ul style="list-style-type: none"> Determine the restrictions that apply to the transport of radioactive dangerous goods in air mail and the correct method of sending them. 		No						Needs to be in training but is not considered to be an examination subject		
2.5 Variations	<ul style="list-style-type: none"> Apply appropriate state and operator variations to radioactive consignments 		*	M	A	1	1	1-1	Either state or operator		
3. Classification	Classify and allocate for radioactive dangerous goods. Specifically:										
3.1 Types of radioactive materials (e.g. LSA, special form, fissile)	<ul style="list-style-type: none"> Classify different types of radioactive material 		*	M	C-Both & D if job involves fissile	1 (1 substance)	2	1-1	List on certificate if fissile included in exam		
3.2 Activity limits	<ul style="list-style-type: none"> Identify the activity limits for packages for radioactive material 		*		C both	1	2pt each	1-2			
3.3 Multiple hazards	<ul style="list-style-type: none"> Classify radioactive material with more than one hazard 		No But...		D option if job involves this				List on certificate if Multiple hazards included in exam		
4. Identification	Select appropriate Proper Shipping Names, UN numbers and identify special provisions from the <i>List of Dangerous Goods</i> for radioactive materials (IATA 10.4.A). Specifically:										
4.1 Proper shipping names and UN numbers	<ul style="list-style-type: none"> Select the most appropriate proper shipping name and UN number for an item of radioactive material: 		*	M	A	1 1 sub	1	1-1	(UN Nr & PSN). (If using multiple choice put both UN number and a PSN in each possible answer.)		
4.2 Special provisions	<ul style="list-style-type: none"> Apply appropriate special provisions to a consignment of radioactive material 		*	M	A	1	1	1-1			

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5. Packing											
Identify the <i>general packing requirements</i> in order to appropriately pack/accept an item of radioactive material.											
5.1 Selecting packaging	<ul style="list-style-type: none"> Select the appropriate packaging in relation to the form and activity level of the radionuclide 	<ul style="list-style-type: none"> Verify that the appropriate packaging has been presented in relation to the form and activity level of the radionuclide 	*	M	A	1 (radionuclide)	1	1-1			
5.2 Excepted packages of radioactive materials	<ul style="list-style-type: none"> Determine the activity limits for packages of radioactive material 	N/A	* only shipper	M/L	B-S	1	1	1-1			
5.3 Determination of transport index for radioactive materials	<ul style="list-style-type: none"> Determine the transport index for a package of radioactive material 	N/A	* only shipper	M	C-S	1	2	1-2			
5.4 Category of packages for radioactive materials	<ul style="list-style-type: none"> Assign appropriate Categories to radioactive consignments 	<ul style="list-style-type: none"> Verify that the correct category has been assigned 	*	M	C-Both	1	2	1-2			

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6. Design approvals	To be able to identify the design approvals required for different types of radioactive packagings.										
6.1 Design approvals	<ul style="list-style-type: none"> Identify the design approvals required for different types of radioactive packagings. 		*	M	A	1	1	1-1			
7. Marking and Labelling	To be able to appropriately mark and label a radioactive package										
7.1. Marking	<ul style="list-style-type: none"> Special markings on packages (such as Trefoil symbol, VRI codes, serial numbers etc.) 		*	M	A	1	1	1-1			
	<ul style="list-style-type: none"> Appropriately position and apply markings to consignments of radioactive dangerous goods. 	<ul style="list-style-type: none"> Verify that a radioactive package is correctly marked 	*	H	B-S B-O	2	multiple	N/A	Shipment students to mark and label 2x different packages using value of points as per example given. Acceptance students to be given 2 previously marked and		

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7.2 Labelling	<ul style="list-style-type: none"> Appropriately position, complete and apply appropriate hazard and handling labels to consignments of radioactive dangerous goods. 	<ul style="list-style-type: none"> Verify that an appropriate label has been applied and completed in accordance with the contents. 	*	H	B-S B-O		multiple	N/A	labelled packages (with associated documentation – see below) that contain errors for them to snag using the radac checklists.		
8 Dangerous Goods transport documentation (Shippers Declaration) and other relevant documentation	To be able to complete and/or check all relevant transport documentation and state the requirements for their retention.										

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8.1 Completion of the dangerous goods transport document/ Shipper's Declaration	<ul style="list-style-type: none"> Accurately complete a dangerous goods transport document// Shipper's Declaration 	<ul style="list-style-type: none"> Verify by inspection that a document/ Declaration has been correctly completed 	*	H	B-S & B-O	1½ 2	multiple	N/A	<p>B-S: Shipper 1 ½ SDs (1 full one matches the labels on consignment) remaining type can be extract. Value of points either 1pt or 0.5pt depending upon area of DGD (see example)</p> <p>B-O: 2 x full DGD matching the package. Follow on same line as existing exams. Mark the checklist items rather than the DGD (see example for marking guide)</p>		
8.2 Completion of the Air Waybill (or similar document)	<ul style="list-style-type: none"> Correctly complete an Air Waybill (or similar document) 	<ul style="list-style-type: none"> Verify that an Air Waybill (or similar document) has been correctly completed. 	No						Operator: needs to be in training but is not considered to be an examination subject		
8.3 Addition documents (i.e: competent authority approvals or certificates)	<ul style="list-style-type: none"> Identify when any additional radioactive approvals are required 	<ul style="list-style-type: none"> Verify that any required additional approvals have been provided 	*	H	A & B-O	1	1	1-1	<p>In addition to Part A, for Operators this needs to be covered when accepting the package.</p> <p>A copy of the design approval cert needs to be provided in the items to be checked .(+ something in additional handling info)</p>		

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8.4 NOTOC		<ul style="list-style-type: none"> Accurately complete a NOTOC 	*		B - O	1	2	N/A	White and Yellow Category		
8.5 Retention and dissemination of information	<ul style="list-style-type: none"> identify which documents are required to be retained and for how long 		No						Needs to be in training but is not considered to be an examination subject		
9. Handling	To be able to state the procedures undertaken operator/handling agents when handling radioactive material for air transport										
9.1 Acceptance inspection and use of a check list	N/A	<ul style="list-style-type: none"> Carry out a check using an acceptance check list to confirm that all applicable requirements have been met 	*	H	B - O	2	Multiple	N/A	See 7 and 8.1 above Checklist items score 0.5pt for each correct check-list item.		
9.2 Handling, loading and stowage including <ul style="list-style-type: none"> orientation placing and securing packages replacing labels ULD identification 	N/A	<ul style="list-style-type: none"> Use handling, loading and stowage procedures either to ensure dangerous goods are handled, loaded and stowed correctly or to convey details about them to other persons 	No						Needs to be in training but is not considered to be an examination subject		

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9.3 Separation of radioactive	N/A	<ul style="list-style-type: none"> Appropriately separate packagings and groups of radioactive materials from people, animals and undeveloped film. 	*	H	C-O	1	2	1-2			
9.4 Inspect and deal with packages that are damaged and/or leaking	N/A	<ul style="list-style-type: none"> Inspect consignments for damage or leakage and take appropriate action to deal with any that are found. 	No						Needs to be in training but is not considered to be an examination subject		
9.5 Emergency procedures	<ul style="list-style-type: none"> Provide an overview of emergency procedures and any necessary requested information 	<ul style="list-style-type: none"> Locate and apply emergency procedures (including ERG 	No						Needs to be in training but is not considered to be an examination subject		

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9.6 Reporting procedures		<ul style="list-style-type: none"> • Appropriately report dangerous goods accidents/ incidents/occurrences • Identify and then report any undeclared or mis-declared dangerous goods. 	No						Needs to be in training but is not considered to be an examination subject		