

ASSESSMENT GUIDE FOR TRANSPORT, GENERAL FREIGHT HANDLING, AND CONVEYING GOODS



National Certificate in Professional Driving Qualification ID: 50285

Assessment Guide for Document 5

Transport, freight handling and conveying goods

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|----------------------|--------------------------------------|-----------|--------------|
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Unit Standard 1 of this Volume Answers of Evidence Guide

Unit Standard ID Title: Plan road transport service delivery

Unit Standard number: 123261

Specific Outcome 1

Contextualise the road transport sector within the transport industry.

Assessment Criteria

- Current legislation and codes applicable to the road transport sector are identified in terms of their stated purpose and how they relate to driving. (Legislation and codes can include, but are not limited to relevant road traffic legislation (National, Provincial and Municipal), occupational safety, health and environment legislation, road accident legislation, industrial collective agreements, etc.)
- 2. Categories of licenses, as well as Professional Driving Permits are accurately identified and related to the vehicles to which they apply.
- The relationships between road transport and other modes of transport are explained in terms of the flow of freight, passengers, and services, and the road transport industry is classified as a service industry.
- 4. The volume of passengers and freight carried, as well as the number of people employed in the road transport Industry, are accurately identified, and career opportunities within the industry are identified, in terms of the possible roles in the road transport Industry and the opportunity for movement between these roles.
- 5. Stated advantages to customers in using road transport are justified in terms of the characteristics of road transport.
- 6. Types of road transport services are described in terms of their role in the movement of people and freight/goods and the type and configuration of vehicles required for service provision. (Passenger services and freight delivery services are included; Passenger services include scheduled urban bus service, intercity route services, tour coach, charter coach, school bus, shuttle service, and taxi service; freight delivery services include general freight, furniture removals, bulk liquids and gases, livestock, refrigerated cargo, logs, abnormal freight, courier goods, containers, concrete vehicles. Evidence is required for eight types.)
- Costs associated with the operation of Road Transport Services are accurately identified and strategies for cost reduction are identified in terms of the driver's role in a road transport operations.

Gaps

| Evidence Required | |
|--|-------------------|
| Written Knowledge Test | Evidence sign off |
| Question 1 Identify the Legislation for Road Transport. | Self-assessment |
| identify the Legislation for Roda transport. | Initial |
| Question 2 | |
| Identify the codes that are applicable to Road Transport. | Date |
| Question 3 | |
| Describe the purpose of the following legislation and how this relates to dirving. | |
| Occupational Health and Safety Act Health and Environment Legislation | ECF evaluation |

| Road Accident Legilsation Industrial Collective Agreements | Date |
|---|---------|
| Question 4 Identify the categories of Licenses. | Initial |
| Question 5 Define Professional Driving Permit | |
| Question 6 Explain the relationships between road transport and other modes of transport. The elements include: o flow of freight, o passengers and o services | |
| Question 7 Identify the volume of passengers and freight carried | |
| Question 8 Ask your senior the following: What are the possible roles in the road transport Industry?, What is the opportunity for movement between these roles? | |
| Question 9 State the advantages to customers in using road transport | |
| Question 10 Describe the types of road transport services in terms of their role in the movement of people and freight/goods. | |
| Question 11 Describe the type and configuration of vehicles required for service provision | |
| Question 12 Ask your senior the following: The costs associated with the operation of Road Transport Services. Plans in place to reduce the cost in terms of the driver's role in a road transport operations. | |
| | |

Specific Outcome 2

Describe vehicle components according to manufacturer specifications.

Outcome Range:

One vehicle is required, and the gross vehicle mass must exceed 3.5 tons.

Assessment Criteria

- 1. All specified vehicle components are accurately located and identified. (Vehicle components include the electrical system, cooling system, lubrication system, fuel, clutch, gearbox, differential lock, brake system, tyres, retardation devices, and cab instruments and warning devices.)
- 2. They function only if vehicle components are described according to manufacturer's specification.
- 3. Effects of vehicle components on the safe and efficient operation of the vehicle are described according to manufacturer's specification.
- 4. Interaction between components is explained according to manufacturer specification.
- 5. The effect of weather, road and traffic conditions on each of the components is described according to manufacturer's specification.

| Evidence Required | |
|---|-------------------|
| A copy of the Manufacturer specification and answers | Evidence sign off |
| Instruction: The learner must study the vehicle components in line with the manufacturer specifications. The learner must answer the questions with | Self-assessment |
| reference to the Manufacturer Specifications. | Initial |
| Describe the vehicle components and the effect on safe and efficient operation of the vehicle: | Date |
| o Electrical system o Cooling System | |
| o Lubrication system o Fuel | ECF evaluation |
| o Clutch o Gearbox o Differential lock | Date |
| o Brake system o Tyres o Retardation devices o Cab instruments o Warning devices | Initial |
| Describe the effect of weather, road and traffic conditions on each of the component to manufacturer's specification. | |

Assessment Criteria for Competency:

In order to declare the learner competent he/she must obtain all the specified criteria. The assessor must use his/her own discretion.

Specific Outcome 3

Plan for road transport trips according to specified contexts.

Assessment Criteria

- 1. Information is obtained pertaining to passengers/freight is comprehensive and relevant to route planning.
- 2. Equipment is selected in accordance with selection criteria. (Selection criteria include, but are not limited to freight requirements, legal requirements and expected weather conditions on route.)
- 3. Factors affecting service are described in terms of the potential impact on service.
- 4. Factors can include excessive passenger demand, route deviations and delays, breakdowns, vehicle defects and accidents.

| irect Observation – On t | | Evidence sign off | | | |
|--|-----------|-------------------|----------|---|-----------------|
| Planning Checklist | | | | | Self-assessment |
| Criteria | Competent | Not yet competent | Comments | | Initial |
| Plan for road transport trips | | | | | Date |
| nformation is obtained pertaining | | | | | |
| to passengers or freight handling. The | | | | | |
| information is relevant to the route planning. | | | | | ECF evaluation |
| The correct equipment is selected for specific job function in line with | | | | - | Date |
| the standards and legislation | | | | | Initial |
| The potential impact on service is alerted before the time | | | | | |
| Manage: Passenger demand | | | | | |
| Route deviations and delays | | | | | |
| Vehicle breakdown | | | | | |
| Accident reports are completed (if applicable) | | | | | |

Assessment Criteria for Competency:

In order to declare the learner competent he/she must obtain all the specified criteria. The assessor must use his/her own discretion.

Specific Outcome 4

Explain the impact of specific conditions in terms of vehicle and driver performance.

Outcome Range:

Conditions include weather, road and/or traffic conditions.

Assessment Criteria

- The effect that weather, road and traffic conditions have on vehicle performance and driver actions is explained for specific contexts. (Weather conditions include wet weather; road conditions include road surfaces (e.g. dirt roads, gravel roads, potholes, etc.), road shapes (e.g. mountain roads, hill roads, etc.) and road types (e.g., national or regional roads); traffic conditions include high and low density traffic.)
- 2. The influence of driver actions on the cost effective and efficient operation of vehicles is explained in terms of relevant, specified efficiency and effectiveness criteria.
- 3. The effect of internal psychological responses and medical conditions on driving performance is described in terms of how to manage these responses and conditions. (Psychological responses can include stress, effects of substance abuse, etc

| | ividence Required Direct observation – On th | Evidence sign off | | | |
|---|--|-------------------|--------------------|----------|-----------------|
| The learner comply with the following Responsible actions and the learner follow all instructions in line with the legislation and all relevant procedures and standards Road surfaces Including: potholes, dirt roads Competent Competent Date ECF evaluation Date | Inspection Ch | ecklist (Behav | ior – Driver Perfo | ormance) | Self-assessment |
| Responsible actions and the learner follow all instructions in line with the legislation and all relevant procedures and standards Road surfaces Including: potholes, dirt roads Date FCF evaluation Date | Criteria The learner comply with the following | Competent | | Comments | Initial |
| procedures and standards Road surfaces Including: potholes, dirt roads Date | Responsible actions and the learner follow all instructions in line with the legislation | | | | Date |
| Including: potholes, dirt roads | procedures and | | | | ECF evaluation |
| Initial | Including: potholes, | | | | Date |
| | | | | 1 | Initial |
| | | | | | |
| | | | | | |
| | | | | | |

Assessment Criteria for Competency:

In order to declare the learner competent he/she must obtain all the specified criteria. The assessor must use his/her own discretion.

Unit Standard 2 of this Volume Answers of Evidence Guide – Integrated On the job

Unit Standard ID Title: Load General Freight

Unit Standard number: 123262

Specific Outcome 1

Prepare for loading/off-loading processes according to specified procedures

Assessment Criteria

- 1. Information is obtained pertaining to freight that is comprehensive and relevant.
- 2. The characteristics and specific requirements of the commodity to be transported are identified. (Commodities can include liquids, perishables, fragile goods, hazardous goods, livestock, etc.)
- 3. Compatibility of commodities to be transported is established and appropriate action is taken to ensure the maintenance of the freight quality.
- 4. Appropriate securing and/or loading equipment and personal protective equipment are available and functional.

Specific Outcome 2

Load general freight according to context requirements.

Assessment Criteria

- 1. Loading site is evaluated for suitability and the vehicle is positioned accordingly.
- 2. Loading information is reconciled with the actual load.
- Loading sequence is planned in accordance with loading criteria. (Loading criteria include, but are not limited to the "last out; first in-principle" and legal requirements in terms of gross vehicle mass and axle loading.)
- 4. Vehicle is loaded according to operational, safety and legal requirements and by using the appropriate means.
- 5. The impact of load positioning and type on the stability of the vehicle is accurately described.
- 6. The safety problems associated with the transportation of general freight are identified for speciic

Specific Outcome 3

Secure general freight according to product requirements.

Assessment Criteria

- The appropriate securing equipment is selected in accordance with selection criteria. (Selection criteria include, but are not limited to freight requirements, legal requirements and expected weather conditions on route.)
- 2. The appropriate securing equipment is utilised in a safe manner and in accordance with commodity and vehicle requirements. (Securing equipment includes, but is not limited to lashing, protective, and restraining equipment.)
- On-the-road problems are addressed according to specified procedures. (Problems include shifting loads.)

Specific Outcome 4

Off-load general freight according to specified procedures.

- 1. Off-loading site is evaluated for suitability and the vehicle is positioned accordingly.
- 2. Vehicle is off-loaded according to operational; safety and legal requirements and by using the appropriate means.
- 3. Off-loading information is reconciled with the cargo, which has been off-loaded.
- 4. Housekeeping principles are applied so that the site is left as it was found; all debris is cleared and equipment is checked against the inventory and safely stored.
- 5. Relevant information is timeously communicated to the appropriate parties. (Information includes, but is not limited to non-conformance to quality standards, delays, and customer complaints)

EVALUATION Criteria Checklist

| Evidence Red | quired | | | | | Evidence sign off |
|--|---------------------|----------------------|----------------------------|----------|---|-------------------|
| Before - Step 1 - Prepare for loading/off-loading processes according | | Self-assessment | | | | |
| Criteria | Exceed requirements | Meet requirements | Does not meet requirements | Comments | | Initial |
| Pre-planning Information pertaining to freight that is comprehensive and relevant. | | 1 | NYC | | _ | |
| Identifying commodities to be transported such as: liquids, perishables, fragile goods, hazardous goods, livestock, etc. | | 1 | NYC | | | Date |
| Appropriate action is taken to ensure the maintenance of the freight meets the quality. | | V | NYC | | | |
| Appropriate securing and/or loading equipment and personal protective equipment are available and functional. | | √ | NYC | | | ECF evaluation |
| During - Step 2 - Load general freight according to context requirement | exceed | Meet | Does not | Comments | | Date |
| Criteria | requirements | requirements | meet requirements | Comments | | Initial |
| Evaluating the general load and loading information to accept with the actual load in line with requirements. | | 1 | NYC | | | |
| The vehicle is positioned accordingly to the correct procedures | | 1 | NYC | | | |
| Loading sequence is planned according to the "last out; first in-principle" and legal requirements in terms of gross vehicle mass and axle loading is applied. | | V | NYC | | | |
| The learner is able to describe the impact of load positioning and type on the stability of the vehicle is accurately | | V | NYC | | | |
| The learner is able to identify the safety problems associated with the transportation of general freight | | V | NYC | | | |

EVALUATION Criteria Checklist

| | Evidence Requ | | | | | | Evidence sign off |
|---|---|---------------------|----------------------|----------------------------|----------|--|----------------------|
| Evaluation Checklist | | | | | | | LVIGETICE SIGIT OII |
| During - Step 3 - Secure general freight according to product requirements. | | | | | | | |
| Criteria | | Exceed requirements | Meet requirements | Does not meet requirements | Comments | | Initial |
| 1. | The appropriate securing equipment is selected to freight requirements, legal requirements and expected weather conditions on route. | | √ | NYC | | | Date |
| 2. | The appropriate securing equipment is utilised in a safe manner and in accordance with commodity and vehicle requirements. (Securing equipment includes, but is not limited to lashing, protective, and restraining equipment.) | | √ | NYC | | | |
| 3. | On-the-road problems are addressed according to specified procedures.(Problems include shifting loads.) | | √ | NYC | | | ECF evaluation Date |
| fter - St | ep 4 - Off-load general freight according to specified procedur | | | | | | |
| Criteria | | Exceed requirements | Meet requirements | Does not meet requirements | Comments | | Initial |
| 1. | Off-loading site is evaluated for suitability and the vehicle is positioned accordingly | | V | NYC | | | |
| 2. | Vehicle is off-loaded according to operational; safety and legal requirements. | | √ | NYC | | | |
| 3. | Off-loading information is prepared to accept the cargo, which has been off-loaded. | | √ | NYC | | | |
| 4. | Housekeeping principles are applied so that the site is left as it was found; all debris is cleared and equipment is checked against the inventory and safely stored. | | V | NYC | | | |
| 5. | Important information is communicated and brought under the relevant persons attention with non-conformance to quality standards, delays, and customer complaints | | V | NYC | | | |

Assessment Criteria for Competency:

In order to declare the learner competent he/she must meet all the criteria. The minimum requirement is that the learner 'meets requirements' in all criteria.

Unit Standard 3 of this Volume Answers of Evidence Guide

Unit Standard ID Title: Convey dangerous goods by road

Unit Standard number: 123259

Specific Outcome 1

Comply with relevant legal documentation requirements.

- 1. Legal concepts are defined and their responsibilities explained in terms of the National Road Traffic Act 93 of 1996. (Legal concepts include:
- @ Consignee. Consignor. Operator. Qualified Person.
 - 2. The meaning and function of each component on warning signs and documents are explained, in terms of SANS 10232 Part 1. (Warning signs and documents include:
- @ Warning panel. Danger Warning Diamond. Tremcard/Treccard. Dangerous Goods Declaration.
 - 3. Danger warning placards, specific to the substance loaded on the vehicle, are checked for correct fitting on the vehicle.
 - 4. All relevant statutory documents are carried and placed in the designated space. (Statutory documents include, for example, Regulation 281 of the National Road Traffic Act.)

| Evidence Required | | |
|--|----------|-------------------|
| Questioning | <u> </u> | Evidence sign off |
| Question 1 (1) | | Self-assessment |
| In terms of the National Road Traffic Act of 1996, what is a "consignee" and what are they responsible for? A "consignee" is the party that takes final physical ownership of the dangerous goods product. | | Initial Date |
| Question 2 (1) | | Baic |
| In terms of the National Road Traffic Act of 1996, what is a "consignor" and | | |
| what are they responsible for? A "consignor" is the party who offers dangerous goods for transportation. | | |
| Question 3 (1) | | |
| In terms of the National Road Traffic Act of 1996, what is an "operator" and what are they responsible for? An "operator" is the party that uses a vehicle for the transportation of dangerous goods. In other words, they are the transporters. | | |
| Question 4 (1) | | ECF evaluation |
| In terms of the National Road Traffic Act of 1996, what is a "qualified person" and what are they responsible for? | | |
| A "qualified person" is a person trained in the handling of dangerous goods and who is specifically nominated by the "consignee", "consignor" or the "operator". | | |
| Question 5 (6) | | |

Using the example provided, identify the various components of warning Date signs and indicate their meaning and function. The various components of warning signs: Initial Dimensions in millimetres 700 290 380 130 380 400 115 115 Legend Goods identification zone
 Goperator telephonic advice zone
 Specialist telephonic advice zone
 Hazard class diamond zone
 Position of hazard class diamond or mixed load diamond
 Position(s) of subsidiary risk diamond(s) Question 6 (3) Name and briefly explain the contents of the documents, which must accompany the conveyance of dangerous goods. The documents which must accompany the conveyance of dangerous goods are: Regulation 281 of the National Road Traffic Act of 1996. Transport Emergency Card (Abbreviated: TREMCARD or TRECCARD) Dangerous Goods Declaration. Question 7 (1)

Where and how must the documents, which must accompany the conveyance of dangerous goods, be stored?

The documents which must accompany the conveyance of dangerous goods must be stored in an orange coloured container (box type or cylindrical type) firmly mounted in the center rear position of the driver's cabin and within reach of either side window or through a broken windshield.

Assessment Criteria for Competency:

The learner must obtain at least 7/14 to be competent.

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Specific Outcome 2

Apply safety and standard operating procedures during loading and off-loading in terms of SANS 10231.

Assessment Criteria

- Information is extracted from relevant sources and utilised to ensure safe handling of classified goods and substances
- Duties of the driver before proceeding on route, in terms of SANS 10231, are adhered to at all times.
- 3. Standard Operating Procedures (relating to the class of substance/goods and related equipment) are adhered to in order to prepare the vehicle for loading and off-loading.
- 4. Personal Protective equipment, suitable to the class of substance, is worn during loading and offloading.
- 5. Safety equipment and procedures suitable to the class of substance, is used during loading and off-loading
- 6. The nine hazard classes are listed and the properties of the class of substance transported are explained.
- 7. The concept of compatibility is explained as it relates to dangerous goods.

| Evidence Required Structured interview | Evidence sign off | | | |
|--|-------------------|-------------------|----------|-----------------|
| | | | | Self-assessment |
| Description | Competent | Not yet competent | Comments | Initial |
| Information must be available to ensure the safe handling of | | | | Date |
| dangerous goods. In which location can this information be | | | | Buile |
| found ? | | | | |
| What source documentation | | | | |
| should be used to ensure the safe | | | | |
| handling of dangerous goods and | | | | ECF evaluation |
| substances? According to SANS | | | | |
| 10231, what are the | | | | |
| duties of the driver of a vehicle conveying | | | | Date |
| dangerous goods before proceeding on | | | | |
| route. | | | | Initial |

Assessment Criteria for Competency:

The learner must obtain all the outcomes in order to be declared competent.

Question 1 (5)

List the items of personal protective equipment that are available when loading and off-loading dangerous goods.

- 1. Protective body suites, which enclose the head, torso, arms and legs.
- 2. Goggles or face shields (for eyes and face).
- 3. Protective gloves (for hands).
- 4. Protective boots (for the feet).
- 5. Respiration masks and oxygen breathers to prevent the inhalation of dangerous fumes, gasses or powders.

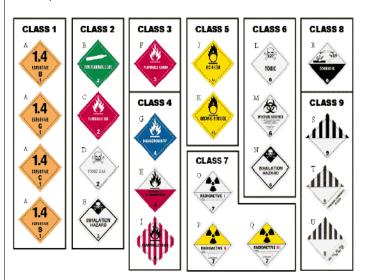
Question 2 (9)

What types of safety equipment are available when loading and offloading dangerous goods?

- 1. Suitable load lifting mechanisms (e.g. hoists or forklifts).
- 2. Pallets designed to capture leaks or overflow in a special sump.
- 3. Industrial plastic wrap to secure and seal goods.
- 4. Gas storage cages.
- 5. Goods isolation cages.
- 6. Fire fighting equipment (Extinguishers and water hoses).
- 7. Advanced First-Aid kits which are equipped for injury and decontamination treatment.
- 8. Decontamination showers.
- 9. Emergency spill recovery kits.

Question 3 (9)

Name the 9 (nine) hazard classes together with their sub-divisions (sub-classes).



- 1. Class 1: Explosives (Classes 1.1, 1.2, 1.3, 1.4, 1.5 and 1.6).
- 2. Class 2: Gases (Classes 2.1, 2.2, 2.3).
- 3. Class 3: Flammable Liquids.
- 4. Class 4: Flammable Solids. (Classes 4.1, 4.2, 4.3).
- 5. Class 5: Oxidising Substances and Organic Peroxides.
- 6. Class 6: Toxic Substances and Infectious Substances.
- 7. Class 7: Radioactive Materials (3 gradings of intensity)
- 8. Class 8: Corrosive Materials.

Self-assessment

| A comparison of the second content of the se | 9. Class 9: Miscellaneous Dangerous Substances and Articles. | Initial |
|--|--|-----------|
| Identify the properties of the 9 (nine) hazard classes together with their sub- divisions (sub-classes). Class 1: Explosives Sub-Class 1.1: Mass explosion or total load explosion hazard, e.g. black powder. Sub-Class 1.2: Projection hazard, e.g., hand grenades. Sub-Class 1.3: Fire hazard together with minor blast or projection hazard. Sub-Class 1.5: Very stable explosives, e.g. dynamite, bombs. Sub-Class 1.6: Negligible explosive hazard, e.g., Ifreworks. Sub-Class 1.6: Negligible explosive hazard, e.g., UN 0486 articles. Class 2: Gases Sub-Class 2.1: Any gas which is ignitable when mixed with air. Sub-Class 2.2: Gasses that are transported at a pressure not less than 280 KPA. Sub-Class 2.3: Toxic or Corrosive gasses that are a health hazard. Class 3: Flammable Liquids Class 4: Substances liable to spontaneous combustion. Sub-Class 4.2: Substances liable to spontaneous combustion. Sub-Class 4.3: Substances which emit flammable gasses on contact with water. Class 5: Oxidising Substances and Organic Peroxides Unstable organic materials that ignite readily or react dangerously with other substances. Class 7: Radioactive Materials Substances which can cause visible damage to living tissue or which can damage other cargo. Class 9: Miscellaneous Dangerous Substances and Articles Dangerous substances not covered by other classes. Question 5 (2) Explain the concept of "compatibility". Compatibility means that certain dangerous goods may or may not be loaded together subject to certain provisions. | | n iiii di |
| Identify the properties of the Y (nine) hazard classes together with their subdivisions (sub-classes). Class 1: Explosives Sub-Class 1.1: Mass explosion or total load explosion hazard, e.g. black powder. Sub-Class 1.2: Projection hazard, e.g., hand grenades. Sub-Class 1.3: Fire hazard together with minor blast or projection hazard. Sub-Class 1.4: Minor explosive hazard, e.g., fireworks. Sub-Class 1.5: Very stable explosives, e.g., dynamite, bombs. Sub-Class 1.6: Negligible explosives, e.g., dynamite, bombs. Sub-Class 2.1: Any gas which is ignitable when mixed with air. Sub-Class 2.2: Gasses that are transported at a pressure not less than 280 KPA. Sub-Class 2.3: Toxic or Corrosive gasses that are a health hazard. Class 3: Rammable Liquids Class 4: Substances liable to spontaneous combustion. Sub-Class 4.2: Substances, which emit flammable gasses on contact with water. Class 5: Oxidising Substances and Organic Peroxides Unstable arganic materials that ignite readily or react dangerously with other substances. Class 6: Toxic Substances and Infectious Substances Class 7: Radioactive Materials Substances which can cause visible damage to living tissue or which can damage other cargo. Class 9: Miscellaneous Dangerous Substances and Articles Dangerous substances not covered by other classes. Question 5 (2) Exploin the concept of "compatibility". Compatibility means that certain dangerous goods may or may not be loaded together subject to certain provisions. | Question 4 (18) – 2 marks per nazara | |
| Sub-Class 1.1: Mass explosion or total load explosion hazard, e.g. black powder. Sub-Class 1.2: Projection hazard, e.g. hand grenades. Sub-Class 1.3: Fire hazard together with minor blast or projection hazard. Sub-Class 1.5: Very stable explosives, e.g. dynamite, bombs. Sub-Class 1.6: Negligible explosives, e.g., dynamite, bombs. Sub-Class 1.6: Negligible explosive hazard, e.g. UN 0486 articles. Class 2: Gases Sub-Class 2.1: Any gas which is ignitable when mixed with air. Sub-Class 2.3: Toxic or Corrosive gasses that are a health hazard. Class 3: Flammable Llquids Class 4: Hammable Solids Sub-Class 4.1: Solids which are readily combustible. Sub-Class 4.3: Substances liable to spontaneous combustion. Sub-Class 4.3: Substances, which emit flammable gasses on contact with water. Class 5: Oxidising Substances and Organic Peroxides Unstable organic materials that ignite readily or react dangerously with other substances. Class 6: Toxic Substances and Infectious Substances Class 7: Radioactive Materials (3 gradings of intensity) Class 8: Corrosive Materials Substances which can cause visible damage to living tissue or which can damage other cargo. Class 9: Miscellaneous Dangerous Substances and Articles Dangerous substances not covered by other classes. Question 5 (2) Explain the concept of "compatibility". Compatibility means that certain dangerous goods may or may not be loaded together subject to certain provisions. | Identify the properties of the 9 (nine) hazard classes together with their subdivisions (sub-classes). | Date |
| powder. Sub-Class 1.2: Projection hazard, e.g., hand grenades. Sub-Class 1.3: Fire hazard together with minor blast or projection hazard. Sub-Class 1.4: Minor explosive hazard, e.g., fireworks. Sub-Class 1.4: Minor explosive hazard, e.g., UN 0486 articles. Sub-Class 1.6: Negligible explosive hazard, e.g., UN 0486 articles. Class 2: Gases Sub-Class 2.1: Any gas which is ignitable when mixed with air. Sub-Class 2.2: Gasses that are transported at a pressure not less than 280 KPA. Sub-Class 2.3: Toxic or Corrosive gasses that are a health hazard. Class 3: Flammable Liquids Class 4: Flammable Solids Sub-Class 4.1: Solids which are readily combustible. Sub-Class 4.2: Substances liable to spontaneous combustion. Sub-Class 4.3: Substances, which emit flammable gasses on contact with water. Class 5: Oxidising Substances and Organic Peroxides Unstable organic materials that ignite readily or react dangerously with other substances. Class 6: Toxic Substances and Infectious Substances Class 7: Radioactive Materials Substances which can cause visible damage to living tissue or which can damage other cargo. Class 9: Miscellaneous Dangerous Substances and Articles Dangerous substances not covered by other classes. Question 5 (2) Explain the concept of "compatibility". Compatibility means that certain dangerous goods may or may not be loaded together subject to certain provisions. | Class 1: Explosives | |
| Sub-Class 1.3: Fire hazard together with minor blast or projection hazard. Sub-Class 1.4: Minor explosive hazard, e.g., fireworks. Sub-Class 1.5: Very stable explosives, e.g., dynamite, bombs. Sub-Class 1.6: Negligible explosive hazard, e.g. UN 0486 articles. Class 2: Gases Sub-Class 2.1: Any gas which is ignitable when mixed with air. Sub-Class 2.2: Gasses that are transported at a pressure not less than 280 KPA. Sub-Class 2.3: Toxic or Corrosive gasses that are a health hazard. Class 3: Flammable Liquids Class 4: Flammable Solids Sub-Class 4.1: Solids which are readily combustible. Sub-Class 4.2: Substances liable to spontaneous combustion. Sub-Class 4.3: Substances, which emit flammable gasses on contact with water. Class 5: Oxidising Substances and Organic Peroxides Unstable organic materials that ignite readily or react dangerously with other substances. Class 6: Toxic Substances and Infectious Substances Class 6: Toxic Substances and Infectious Substances Class 7: Radioactive Materials (3 gradings of intensity) Class 8: Corrosive Materials Substances which can cause visible damage to living tissue or which can damage other cargo. Class 9: Miscellaneous Dangerous Substances and Articles Dangerous substances not covered by other classes. Question 5 (2) Explain the concept of "compatibility". Compatibility means that certain dangerous goods may or may not be loaded together subject to certain provisions. | Sub-Class 1.1: Mass explosion or total load explosion hazard, e.g. black powder. | |
| Sub-Class 1.5: Very stable explosives, e.g. dynamite, bombs. Sub-Class 1.6: Negligible explosive hazard, e.g. UN 0486 articles. Class 2: Gases Sub-Class 2.1: Any gas which is ignitable when mixed with air. Sub-Class 2.2: Gasses that are transported at a pressure not less than 280 KPA. Sub-Class 2.3: Toxic or Corrosive gasses that are a health hazard. Class 3: Flammable Liquids Class 4: Flammable Solids Sub-Class 4.1: Solids which are readily combustible. Sub-Class 4.2: Substances liable to spontaneous combustion. Sub-Class 4.3: Substances, which emit flammable gasses on contact with water. Class 5: Oxidising Substances and Organic Peroxides Unstable organic materials that ignite readily or react dangerously with other substances. Class 6: Toxic Substances and Infectious Substances Class 7: Radioactive Materials Substances which can cause visible damage to living tissue or which can damage other cargo. Class 9: Miscellaneous Dangerous Substances and Articles Dangerous substances not covered by other classes. Question 5 (2) Explain the concept of "compatibility". Compatibility means that certain dangerous goods may or may not be loaded together subject to certain provisions. | Sub-Class 1.2: Projection hazard, e.g. hand grenades. Sub-Class 1.3: Fire hazard together with minor blast or projection hazard. Sub-Class 1.4: Minor explosive hazard, e.g. fireworks. | |
| Sub-Class 2.1: Any gas which is ignitable when mixed with air. Sub-Class 2.2: Gasses that are transported at a pressure not less than 280 KPA. Sub-Class 2.3: Toxic or Corrosive gasses that are a health hazard. Class 3: Flammable Liquids Class 4: Flammable Solids Sub-Class 4.1: Solids which are readily combustible. Sub-Class 4.2: Substances liable to spontaneous combustion. Sub-Class 4.3: Substances, which emit flammable gasses on contact with water. Class 5: Oxidising Substances and Organic Peroxides Unstable organic materials that ignite readily or react dangerously with other substances. Class 6: Toxic Substances and Infectious Substances Class 6: Toxic Substances and Infectious Substances Class 7: Radioactive Materials (3 gradings of intensity) Class 8: Corrosive Materials Substances which can cause visible damage to living tissue or which can damage other cargo. Class 9: Miscellaneous Dangerous Substances and Articles Dangerous substances not covered by other classes. Question 5 (2) Explain the concept of "compatibility". Compatibility means that certain dangerous goods may or may not be loaded together subject to certain provisions. | Sub-Class 1.5: Very stable explosives, e.g. dynamite, bombs. Sub-Class 1.6: Negligible explosive hazard, e.g. UN 0486 articles. | |
| Sub-Class 2.2: Gasses that are transported at a pressure not less than 280 KPA. Sub-Class 2.3: Toxic or Corrosive gasses that are a health hazard. Class 3: Flammable Liquids Class 4: Flammable Solids Sub-Class 4.1: Solids which are readily combustible. Sub-Class 4.2: Substances liable to spontaneous combustion. Sub-Class 4.3: Substances, which emit flammable gasses on contact with water. Class 5: Oxidising Substances and Organic Peroxides Unstable organic materials that ignite readily or react dangerously with other substances. Class 6: Toxic Substances and Infectious Substances Class 7: Radioactive Materials (3 gradings of intensity) Class 8: Corrosive Materials Substances which can cause visible damage to living tissue or which can damage other cargo. Class 9: Miscellaneous Dangerous Substances and Articles Dangerous substances not covered by other classes. Question 5 (2) Explain the concept of "compatibility". Compatibility means that certain dangerous goods may or may not be loaded together subject to certain provisions. | Class 2: Gases | |
| Sub-Class 2.3: Toxic or Corrosive gasses that are a health hazard. Class 3: Flammable Liquids Class 4: Flammable Solids Sub-Class 4.1: Solids which are readily combustible. Sub-Class 4.2: Substances liable to spontaneous combustion. Sub-Class 4.3: Substances, which emit flammable gasses on contact with water. Class 5: Oxidising Substances and Organic Peroxides Unstable organic materials that ignite readily or react dangerously with other substances. Class 6: Toxic Substances and Infectious Substances Class 7: Radioactive Materials (3 gradings of intensity) Class 8: Corrosive Materials Substances which can cause visible damage to living tissue or which can damage other cargo. Class 9: Miscellaneous Dangerous Substances and Articles Dangerous substances not covered by other classes. Question 5 (2) Explain the concept of "compatibility". Compatibility means that certain dangerous goods may or may not be loaded together subject to certain provisions. | Sub-Class 2.1: Any gas which is ignitable when mixed with air. Sub-Class 2.2: Gasses that are transported at a pressure not less than 280 KPA. | |
| Class 4: Flammable Solids Sub-Class 4.1: Solids which are readily combustible. Sub-Class 4.2: Substances liable to spontaneous combustion. Sub-Class 4.3: Substances, which emit flammable gasses on contact with water. Class 5: Oxidising Substances and Organic Peroxides Unstable organic materials that ignite readily or react dangerously with other substances. Class 6: Toxic Substances and Infectious Substances Class 7: Radioactive Materials (3 gradings of intensity) Class 8: Corrosive Materials Substances which can cause visible damage to living tissue or which can damage other cargo. Class 9: Miscellaneous Dangerous Substances and Articles Dangerous substances not covered by other classes. Question 5 (2) Explain the concept of "compatibility". Compatibility means that certain dangerous goods may or may not be loaded together subject to certain provisions. | Sub-Class 2.3: Toxic or Corrosive gasses that are a health hazard. | |
| Sub-Class 4.1: Solids which are readily combustible. Sub-Class 4.2: Substances liable to spontaneous combustion. Sub-Class 4.3: Substances, which emit flammable gasses on contact with water. Class 5: Oxidising Substances and Organic Peroxides Unstable organic materials that ignite readily or react dangerously with other substances. Class 6: Toxic Substances and Infectious Substances Class 7: Radioactive Materials (3 gradings of intensity) Class 8: Corrosive Materials Substances which can cause visible damage to living tissue or which can damage other cargo. Class 9: Miscellaneous Dangerous Substances and Articles Dangerous substances not covered by other classes. Question 5 (2) Explain the concept of "compatibility". Compatibility means that certain dangerous goods may or may not be loaded together subject to certain provisions. | Class 3: Flammable Liquids | |
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| Unstable organic materials that ignite readily or react dangerously with other substances. Class 6: Toxic Substances and Infectious Substances Class 7: Radioactive Materials (3 gradings of intensity) Class 8: Corrosive Materials Substances which can cause visible damage to living tissue or which can damage other cargo. Class 9: Miscellaneous Dangerous Substances and Articles Dangerous substances not covered by other classes. Question 5 (2) Explain the concept of "compatibility". Compatibility means that certain dangerous goods may or may not be loaded together subject to certain provisions. | Sub-Class 4.1: Solids which are readily combustible. Sub-Class 4.2: Substances liable to spontaneous combustion. Sub-Class 4.3: Substances, which emit flammable gasses on contact with water. | |
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| Class 8: Corrosive Materials Substances which can cause visible damage to living tissue or which can damage other cargo. Class 9: Miscellaneous Dangerous Substances and Articles Dangerous substances not covered by other classes. Question 5 (2) Explain the concept of "compatibility". Compatibility means that certain dangerous goods may or may not be loaded together subject to certain provisions. | Class 6: Toxic Substances and Infectious Substances | |
| Substances which can cause visible damage to living tissue or which can damage other cargo. Class 9: Miscellaneous Dangerous Substances and Articles Dangerous substances not covered by other classes. Question 5 (2) Explain the concept of "compatibility". Compatibility means that certain dangerous goods may or may not be loaded together subject to certain provisions. | Class 7: Radioactive Materials (3 gradings of intensity) | |
| Dangerous substances not covered by other classes. Question 5 (2) Explain the concept of "compatibility". Compatibility means that certain dangerous goods may or may not be loaded together subject to certain provisions. | Class 8: Corrosive Materials Substances which can cause visible damage to living tissue or which can damage other cargo. | |
| Explain the concept of "compatibility". Compatibility means that certain dangerous goods may or may not be loaded together subject to certain provisions. | Class 9: Miscellaneous Dangerous Substances and Articles Dangerous substances not covered by other classes. | |
| Compatibility means that certain dangerous goods may or may not be loaded together subject to certain provisions. | Question 5 (2) | |
| (Total: 43) | Explain the concept of "compatibility". Compatibility means that certain dangerous goods may or may not be loaded together subject to certain provisions. | |
| | (Total: 43) | |

Assessment Criteria for Competency:

The learner must obtain at least 22/43 to be declared competent.

Specific Outcome 3

Apply safety procedures in the event of an incident.

- 1. Information is extracted from the tremcard/treccard or other relevant source/s and utilised to implement the appropriate response in the event of an incident.
- 2. The correct fire extinguishing equipment is utilised in the event of an incident.
- 3. Personal protective equipment suitable to the class of substance is worn in the event of an incident.
- 4. Safety equipment suitable to the class of substance is used in the event of an incident.

| Evidence Required | | |
|---|--|-------------------|
| Assignment | | Evidence sign off |
| Reflexive Question 1 (2) An incident involving dangerous goods occurs. Where can one find details | | Self-assessment |
| about the dangerous goods involved in such an incident? The TREMCARD or TRECCARD is where one can find details about the dangerous goods involved in an incident? | | Initial |
| Reflexive Question 2 (2) | | Date |
| Where would one find a Tremcard and what is this card used for ? One would find a Tremcard in the designated space and designated container in the driver's cabin. The Tremcard contains details concerning the type of dangerous goods being transported and what must be done in the event of an incident. | | |
| | | |
| Reflexive Question 3 (4) | | |
| What fire extinguisher/s would one use when: | | |
| wood is burning. when wood is burning – Water, Foam or Dry Powder. | | |
| alcohol is burning. when alcohol is burning – Dry Powder, Foam or Carbon Dioxide. | | |
| propane is burning. when propane is burning – Dry Powder. | | |
| sodium is burning. when sodium is burning – No fire extinguisher, call the fire brigade. | | ECF evaluation |
| Reflexive Question 4 (2) | | |
| Which is the most common fire extinguisher found in a dangerous goods loading/off-loading area? Why do you think that this is so? The DRY POWDER fire extinguisher is the most common extinguisher found in a dangerous goods loading/off-loading area because it can be used on Class A, B and C fires. | | |
| Reflexive Question 5 (5) | | |
| Starting at the head and moving down the body to the feet, explain what personal protective equipment could be used when loading/off-loading | | |

dangerous goods.

- a. Protective body suites which enclose the head, torso, arms and legs.
- b. Goggles or face shields (for eyes and face).
- c. Protective gloves (for hands).
- d. Protective boots (for the feet).
- e. Respiration masks and oxygen breathers to prevent the inhalation of dangerous fumes, gasses or powders.

Reflexive Question 6 (2)

Why could gasses and vapours be dangerous and what personal protective equipment should one put on when they are present? Gasses and vapours could be toxic or corrosive and breathing apparatus will be required.

Reflexive Question 7 (9)

What type of general safety equipment might one expect to find in a dangerous goods loading/off-loading area?

The following general safety equipment might be found in a dangerous goods loading/off-loading area:

- a. Suitable load lifting mechanisms (e.g. hoists or fork-lifts).
- b. Pallets designed to capture leaks or overflow in a special sump.
- c. Industrial plastic wrap to secure and seal goods.
- d. Gas storage cages.
- e. Goods isolation cages.
- f. Fire fighting equipment (Extinguishers and water hoses).
- g. Advanced First-Aid kits which are equipped for injury and decontamination treatment.
- h. Decontamination showers.
- i. Emergency spill recovery kits.

Reflexive Question 8 (2)

When must an incident report be completed?

An incident report be completed for every single incident involving dangerous goods.

Reflexive Question 9 (2)

Is the Occupational Health and Safety Law linked to SA National Standards documentation? Motivate your answer?

Every single law promulgated in South Africa is designed to link in with, and work in conjunction with, every other law.

Assessment Criteria for Competency:

The learner must obtain at least 15/30 to be competent.

Date

Initial

Specific Outcome 4

Comply with the requirements of SANS 10231 in terms of behaviour on route.

- 1. Driving style is adopted in order to maintain load quality and avoid incidents during transportation.
- 2. Duties on route in terms of SANS 10231 are adhered to at all times.

| Evidence Required | |
|---|-------------------|
| Written Knowledge Test | Evidence sign off |
| Section A Question 1 (1) | Self-assessment |
| Discuss the driving style required from drivers transporting dangerous goods. The driving style required from drivers transporting dangerous goods must be based on caution and obedience to the rules of the road. | Initial |
| Question 2 (7) | Date |
| Explain the SANS 10231 on-route requirements when transporting dangerous goods. | |
| The driver shall not allow any passengers or unauthorized persons to be in or on the vehicle at any stage during the journey. | |
| The driver shall adhere to the agreed route and authorized stopping places, unless directed otherwise by a member of the emergency services. | |
| Where pre-planned stops, for example those required every two hours for tyre and spillage checks, are not in designated places, the vehicle shall stop only in areas sufficiently far away from the main traffic flow so as not to present a risk to other road users. | |
| A vehicle that carries dangerous goods shall be under constant supervision while stopped or parked. | |
| 4. The opening of packages, unloading or decanting for any reason, for example for axle overloads, shall not be permitted, except in an authorized and properly equipped area under the supervision of a qualified person, and after the operator has been informed. | ECF evaluation |
| In the event of a mechanical breakdown, regulatory warning triangles shall be placed on the road and the emergency services and the operator shall be informed without delay. | |
| 6. In the event of an incident, the instructions on the transport emergency card(s) shall be followed and all necessary assistance shall be given to the emergency services. The transport emergency card(s) and the DGD(s) shall be handed over to the emergency services when so requested. | |
| Good driving practice with anticipation of potential problem situations shall be exercised at all times. | |

| Section B | | | | | Date |
|--|-----------|----------------------|----------|--|---------|
| Inspection Checklist (Behavior – On route) | | | | | |
| Criteria The learner comply with the following | Competent | Not yet competent | Comments | | Initial |
| Driving style is adopted in order to maintain load quality and avoid incidents during transportation | | | | | |
| Duties on route in terms of SANS 10231 are adhered to at all times. | | | | | |

Assessment Criteria for Competency:

The learner must obtain at least 15/30 to be competent. The learner must be competent in both criteria in section B.