higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

TRANSPORT OPERATIONS
NQF LEVEL 4

15 November 2022

This marking guideline consists of 11 pages.

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SECTION A

QUESTION 1

1.1 C
1.2 A
1.3 D
1.4 C
1.5 B
1.6 A
1.7 A
1.8 C
1.9 B
1.10 D

(10 × 1) **[10]**

QUESTION 2

2.1 True
2.2 True
2.3 False
2.4 True
2.5 False
2.6 True
2.7 False
2.8 False
2.9 False
2.10 True

(10 × 1) **[10]**

QUESTION 3

3.1 C
3.2 A
3.3 D
3.4 E
3.5 B

(5 × 1) **[5]**

QUESTION 4

4.1 Transportation
4.2 warehouse
4.3 intermediary
4.4 Insulated flasks
4.5 Dangerous goods

(5 × 1) **[5]**

TOTAL SECTION A: 30

SECTION B

QUESTION 5

5.1
- Identify the goals or objectives to be achieved.
- Formulate strategies to achieve the goals or objectives
- Arrange or create the means to achieve goals or objectives
- Implement, direct and monitor steps in their proper sequence. (4 × 2) (8)

5.2 **Policies** are the business rules and guidelines of a company.✓ They are statements that clearly and unambiguously set out an organisation's guiding principles and views about a particular matter✓whereas✓**Processes** are **r**elated activities✓ that produce a specific service or product✓ (5)

5.3
- Track ✓transported goods✓
- Negotiate✓ freight charges✓
- Consolidate loads✓ to get the best financial results✓
- Insure cargo✓ and file insurance claims✓
- Schedule and route deliveries
- Control driver behaviour and offences
- Plan and monitor freight-handling procedures
- Manage and control in-transit care of freight
- Manage import and export
- Develop and maintain operational procedures
- Plan and implement/initiate maintenance schedule
- Report on trip costs and improvement schedule
- Report on toll costs, petrol usage and maintenance expenses
- Plan and implement distribution safety and security plans
- Plan and implement driver safety programmes.

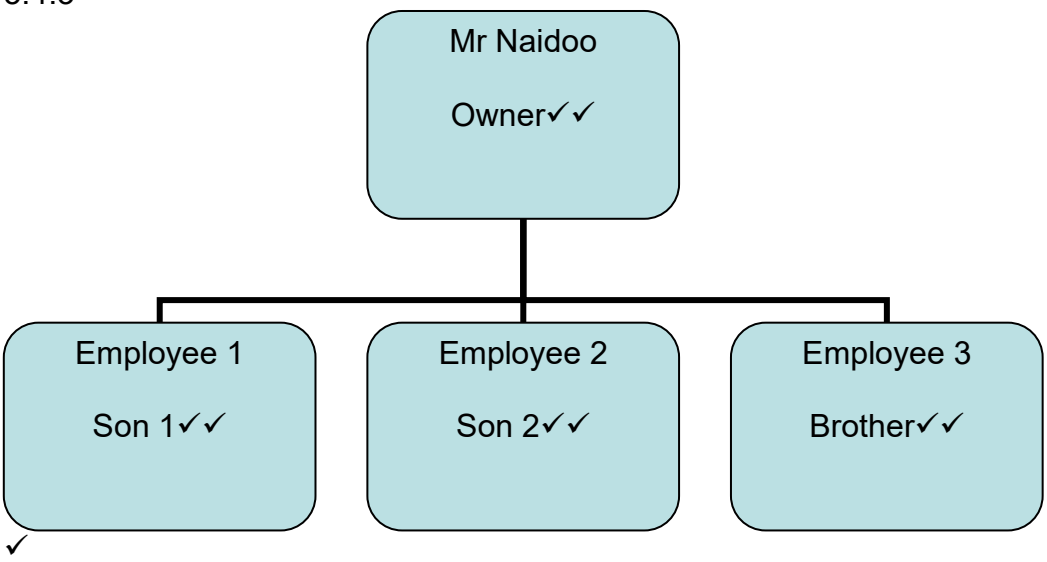
(Any other relevant answer 3 × 2) (6)

5.4 5.4.1 Sole trader (1)

5.4.2 **Advantages of sole trader**

- Being your own boss. The main benefit of being a sole trader is that you are your own boss, and you can dictate the direction of the business.
- Keep all the profits. Another benefit of being a sole trader is that you get to keep all the profits after tax on your business.
- Easy to set up. The process of setting up as a sole trader is much easier and more straightforward than setting up a limited company.
- Low start-up costs. Registering with HMRC is free, so setting up as a sole trader does not incur any costs.
- Maximum privacy. A limited company has to register with Companies House and provide information which is then on public record. (Any relevant answer 4 × 2) (8)

5.4.3



✓

(include ONE mark for correct drawing) (9)

[37]

QUESTION 6

6.1 6.1.1 **Accessibility to markets**
The most important aspect of this lies in the fact that industries can leverage economies of scale in production, ✓ and improve distribution product consumption.✓ It opens up broader markets for diverse outputs of intermediate and finished goods.✓

6.1.2 **Infrastructure**
Transport services form a capital-intensive sector ✓that invests in infrastructure ✓and advanced technology.✓

6.1.3 **Labour force availability**
The sustainability of a business is subjected to availability of an appropriately skilled workforce,✓ from the baseline to management level.✓ The availability of employees is therefore one of the key supply side issues for any industry.✓

(3 × 3) (9)

6.2
- Infrastructure
- Social
- Environmental (Any other relevant answer) (3)

6.3 Direct costs refer to costs that can be attributed or allocated to a specific cost Centre✓ e.g. if a vehicle is registered as a cost centre in a business, its direct costs would include its petrol used, its licence, insurance and maintenance✓ whereas✓, indirect costs refer to costs that are not directly attributable to a specific cost centre✓, e.g. overheads, staff salaries, stationery or advertising. ✓ (5)

6.4 Decentralised distribution means organised delivery✓to each store individually✓ or that all distribution activities are located at different places. (2)

[19]

QUESTION 7

7.1 7.1.1 Abnormal load (1)

7.1.2
- Truck tractor
- Dolly
- Semi-trailer (3)

7.1.3 **Flags** ✓
- Are used to indicate the extremities of the vehicle or load. ✓ It must comply to the following:
  - Be bright red in colour;
  - Indicate the overall length and width of the vehicle or load;
  - Be securely attached to the load on the vehicle;
  - Be placed at the extreme corners of the vehicle or load;
  - Measure at least 600 mm × 600 mm; and
  - Be clean and free to flutter.

Warning board✓
- An abnormal vehicle warning board must be displayed at the front and rear ends of the abnormal vehicle,✓ except in the case of mobile cranes where an abnormal vehicle warning board must be displayed at the rear only.✓

7.1.3 **Lights**✓

- Both the abnormal load vehicle and the escort vehicle/s must be fitted with an amber flashing light.✓ In the case of a mobile crane, an amber flashing light must be fitted to the foremost end of the front overhang so that it is visible from all sides,✓ and a second amber flashing light must be fitted to the rear of the mobile crane.

Escort vehicle✓

- It is part of the operator's responsibility to provide the necessary escort vehicles✓ and to ensure that the driver and other employees are well trained and conversant with escort requirements.✓

(4 × 2) (8)

7.2
- National Road Traffic Act
- National Road Traffic Regulation
- TRH 11: Dimensional and Mass Limitations and Other Requirements for Abnormal Load Vehicles
- South African Bureau of Standards Code of Practice/South African National Standards.

(2 × 2) (4)

7.3 **Width and length**

The number of escort vehicles as well as whether they are owned by the operator or the traffic authority✓ are all based on the dimensions and mass of the loaded vehicle.✓ Permit-issuing authorities use the calculations provided in the TRT 11 document to determine the escorting requirements per abnormal load.

Height

An operator must provide an escort vehicle to drive between 10 m and 50 m✓ ahead of any abnormal vehicle or load that exceeds 4,7 m in height.✓ However, when lifting of overhead lines or other arrangements may require the abnormal vehicle(s) to stop in the roadway, the services of a traffic officer escort is required.

Overhang

An operator must provide one of its own escort vehicles when the front overhang of a mobile crane or foundation digger exceeds the lengths as prescribed by the NRTR.✓ At the discretion of the issuing authority, a traffic officer may need to escort the abnormal vehicle or load when the front overhang exceeds 8 m.✓

Load projection

An operator must provide one of its own escort vehicles where the rear load's projection exceeds 1,8 m.✓ This vehicle must drive behind the abnormal load.✓

(4 × 2) (8)

7.4
- Accidentally running over employees during moving, especially during uncontrolled reverse operations;
- Falling from vehicles or other lifting equipment when loading or offloading;
- Being hit by a moving vehicle or a suspended load;
- Being struck by moving or falling objects that have not been secured properly;
- Collapsing or overturning vehicles; and
- Slips and trips. (Any relevant answer 4 × 2) (8)

[32]

QUESTION 8

8.1 **Duty of care**✓
This means that the generator is responsible for the generated waste in all circumstances.✓ The generator retains the ultimate responsibility for ensuring that the waste is handled, stored, transported, and disposed of according to the legislation and in an environmentally sound and responsible manner.✓

Polluter pays✓
It holds that the person or organisation causing pollution is liable for any costs involved in cleaning it up or rehabilitating its effects.✓ The polluter will not necessarily be the generator, as it is possible that the responsibility for the safe handling, treatment or disposal of waste will pass from one competent contracting party to another.✓ The polluter may therefore not be the generator but could be a disposal site operator or a transporter.

Precautionary principles✓
It assumes that a waste or an identified contaminant of a waste is both highly hazardous and toxic until proven otherwise.✓ Since the legislation is stricter for highly hazardous and toxic wastes, the costs for their treatment and disposal are consequently higher than for wastes of low hazard.✓ (3 × 2) (6)

8.2

- **Explosives:** Engines must be turned off before loading or offloading any explosives. Cargo space must be checked,✓ cargo heaters disabled, and heater fuel tanks must be drained. Care must be taken that there are no sharp points that might damage cargo.✓ Bolts, screws, nails, broken side panels, and broken floorboards must be checked and corrected. Extra care must be taken to protect explosives: packages containing explosives must never be dropped, thrown, or rolled. Damaged packages of explosives or packages that show any dampness or oily stains must never be transported.
- **Corrosive materials:** If loading by hand, breakable containers of corrosive liquid must be loaded one by one, keeping the right side up.✓ These containers must not be dropped or rolled.✓ Load them onto an even floor surface and stack only if lower tier can bear the weight of the upper tier safely. Batteries containing electrolyte must be stored so their liquid cannot spill.
- **Compressed gases:** If the vehicle does not have racks to hold cylinders, the cargo space's floor must be flat.✓ The cylinders must be held upright or braced lying down flat or in racks attached to the vehicle, or in boxes that will keep them from turning over.✓
- **Radioactive materials:** The shipper labels these packages and prints the package's transport index on the label.✓ Since radiation surrounds each package, passing through all nearby packages, the number of packages that can be loaded together is controlled. Their closeness to people, animals, and unexposed film is also controlled.✓

(4 × 2) (8)

8.3 8.3.1

- Name of company
- Date and time of accident
- Location of accident
- A brief description of accident
- Cause of accident
- Number of casualties
- UN numbers of goods involved
- A brief detail of damage to property caused by dangerous goods
- Approximate quantity of goods spilled or released
- Type of load
- Emergency services activated
- A brief detail on clean-up operations, if applicable

(2 × 1) (2)

8.3.2

- Police services
- Emergency services

(2)

8.4 **Scope:** ✓When defining the scope of the emergency plan, it is important to remember that the document aims to acquaint all occupants of facilities or vehicle with the procedures to be implemented✓ during an emergency and must therefore provide details on standard operational guidelines to be followed during the various stages of an emergency.

Plan title and authority: ✓The authority for implementation and line of command must be clearly spelled out.✓

Table of contents: ✓ Must follow a logical sequence, easy to read and be included at the beginning of the plan✓

Distribution lists: To assist in updating and revising the plan, an up-to-date list of all plan locations and persons supplied with a copy of the plan should be included.

Amendment: Any amendments to the plan must be clearly described. Regular reviews of the plan are recommended.

Glossary and abbreviation: A comprehensive glossary and list of abbreviations must be provided for easy reference and to avoid confusion.

Facility description: A brief description of the facility that the plan caters for should be provided

Definitions of situations covered: A clear and simple definition of what constitutes an emergency on the company's site and on the road, and various levels of emergency which are possible, should be provided.

Types of emergencies: The types of emergencies should be clearly defined, for example fires, explosions, spills, gas leaks, civil disturbances, etc.

Response: The plan must identify the person in the company who will assume the role of emergency controller. The plan must also designate alternative organisational positions for the role of emergency controller when the first nominated emergency controller is not available (e.g., where key personnel is absent due to sick leave, off-site meetings, etc.) or for periods when the site is operating at minimum staffing levels (e.g., during weekends).

Internal emergency resources: The plan should list internal emergency resources that are available, for example:

- Firefighting equipment
- First aid equipment
- Fire teams
- Fire suppression mediums, such as foam stock
- Specialist equipment (e.g., front-end loaders, forklifts, etc.)

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Evacuation: The plan needs to contain appropriate evacuation procedures which cater for both visitors to the site, permanent site staff, drivers, etc. Accounting for staff and site visitors is a critical task during emergencies and needs to be given a high priority within the plan.

(3 × 2) (6)

8.5
- The legislative frameworks differ to accommodate the characteristics of the different modes.
- Documentation is customised to cater for mode-specific characteristics and operations.
- Although operations are all geared towards safe handling and transport, the secure loading and offloading of loads depend on the equipment used as well as recommendations and regulations that are mode-specific.
- Monitoring depends on national or international organisation collaboration and on mode-specific legislation.
- Emergency action and response are related to the specific mode and the extent of, and necessity for, international collaboration.
- Clean-ups depend on the area of the leakage and the spill, the geography of the area, the collaboration with international authorities, etc.
- Reporting is prescribed in mode-specific legislation and codes such as the International Maritime Dangerous Goods (IMDG) Code and SANS documents.

(4 × 2) (8)

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TOTAL SECTION B: 120
GRAND TOTAL: 150

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