higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE (VOCATIONAL)

TRANSPORT OPERATIONS
NQF LEVEL 3

08 NOVEMBER 2022

This marking guideline consists of 8 pages.

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SECTION A

QUESTION 1

1.1 C
1.2 B
1.3 C
1.4 D
1.5 A

(5 × 1) **[5]**

QUESTION 2

2.1 Common
2.2 Passenger transport
2.3 Monopoly
2.4 Passengers
2.5 Multimodal transport

(5 × 1) **[5]**

QUESTION 3

3.1 Gantry crane: A device to lift containers and swap units. It has a wheel under each of its four legs. A gantry crane can straddle rail wagons and road vehicles. It also has a twist-locking device at each corner that fits into the corner casting of containers.✓✓

3.2 Carbon-dioxide: A colourless and odourless gas that is formed during respiration, organic decomposition and combustion.✓✓

3.3 Seamless supply chain: A supply chain in which there is constant communication between the different departments and with customers. Information is continually shared to ensure the continual improvement in the production process with customer satisfaction as the ultimate goal.✓✓

3.4 Transtainer: A device that transfers containers from sea-transport vessels to trucks or rail wagons. They run on rails and can move along a quayside.✓✓

3.5 Transportation: It is the key to the effective and efficient operation of various other industries and, therefore ,also to the economic well-being of the country as whole.✓✓

(5 × 2) **[10]**

TOTAL SECTION A: 20

QUESTION 4

4.1 Air transport is the transportation of goods by aircraft. Because of the high cost of air transport, companies hesitate to use it. Nevertheless, it is the only mode of transport that gets products to clients fast and on time.✓✓ (2 × 1) (2)

4.2 Characteristics

- Speed✓ – What is the average speed of movement, in other words, the rate at which a transport mode operates?✓
- Completeness✓ – Does the transport mode offer full transportation services?✓
- Dependability✓ – Is the transport mode reliable?✓
- Capacity✓ – What is the maximum amount that a particular mode can transport?✓
- Frequency✓ – What is the rate at which a transport mode occurs over a particular period?✓
- Cost-effectiveness✓ – Is the transport mode effective and productive in relation to its cost?✓ (5 × 2) (10)

4.3 Two intermodal aspects

- Increases cost
- Results in extra freight handling
- May result in theft (Any 2 × 1) (2)

4.4

- Business factors
  - Striking truck or train drivers and labour unrest.✓✓
  - Industry-specific labour issues such as sectorial bargaining council agreements.✓✓
  - Company budget or limitations in terms of customer agreements such as tender conditions.✓✓
- Safety regulations✓✓
  - Environmental issues and company policy regarding a company's carbon footprint.✓✓
  - Company ISO accreditation requirements with the accompanying rules and regulations.
  - Company infrastructure or lack of it.
  - Unexpected vehicle breakdowns.
- Taxes
  - Customs clearance problems at specific points in the distribution chain.

(Any 5 × 2) (10)

4.5 Electronic procurement

- Minimises outsourced carrier costs.✓✓
- Selects the best set of carriers to meet transportation needs.✓✓
- Determines the best mix of carriers to handle standard and surge distribution needs.✓✓
- Reduces the effort and staff time required to determine the optimal distribution plan.✓✓
- Analyses what-if situations.✓✓
- Evaluates the best combination of carrier discounts to transport the company's volume at the lowest total cost.
- Reduces labour, the time and the cost associated with conducting bids.
- Utilises transportation assets in the most efficient manner possible.
- Reduces uncertainty in the bidding process, thus eliminating the incentive for carriers to inflate rates. (Any 5 × 2) (10)

[34]

QUESTION 5

5.1 Air safety legislation

- The repeal, consolidation and amendment of the aviation laws giving effect to international aviation conventions.
- The control and regulation of aviation within the republic.
- The establishment of a South African civil aviation authority overseeing safety and security.
- The establishment of an independent aviation safety investigation board in compliance with Annex 13 of the Chicago Convention
- Chapter 4 of the convention deals with aircraft accidents, incidents and functions; the powers of the aviation safety investigation board; reporting on the completion of any aircraft accident or incident investigation; and rules and offences.
- Chapter 6, part 5 deals with aviation security.
- Chapter 11, part 1 deals with offences and penalties.
- Chapter 15 deals with technical standards. (Any 5 × 1) (5)

5.2 Routing requirements

Cost✓

The cost of fares is often influenced by the route a transport carrier has to follow. The longer the route, the more costly the journey. All economically viable routes have to be considered; for example, the routes to and from Johannesburg and Durban, but not the route to and from Pofadder, because local services cover that area.✓

Travel time✓

When planning routes, it is crucial that variables such as the distance to and from stops and the waiting periods between modes be considered.✓

Reliability✓
Another important requirement is the reliability of service on specific routes. The reliability on routes may be influenced by factors such as poor road surfaces and traffic congestion.✓

Convenience✓
In terms of convenience, the frequency of the service, the operating hours, the number of intermodal or same-modal transfers, and the ease of access and use of the fare collection system must be considered.✓

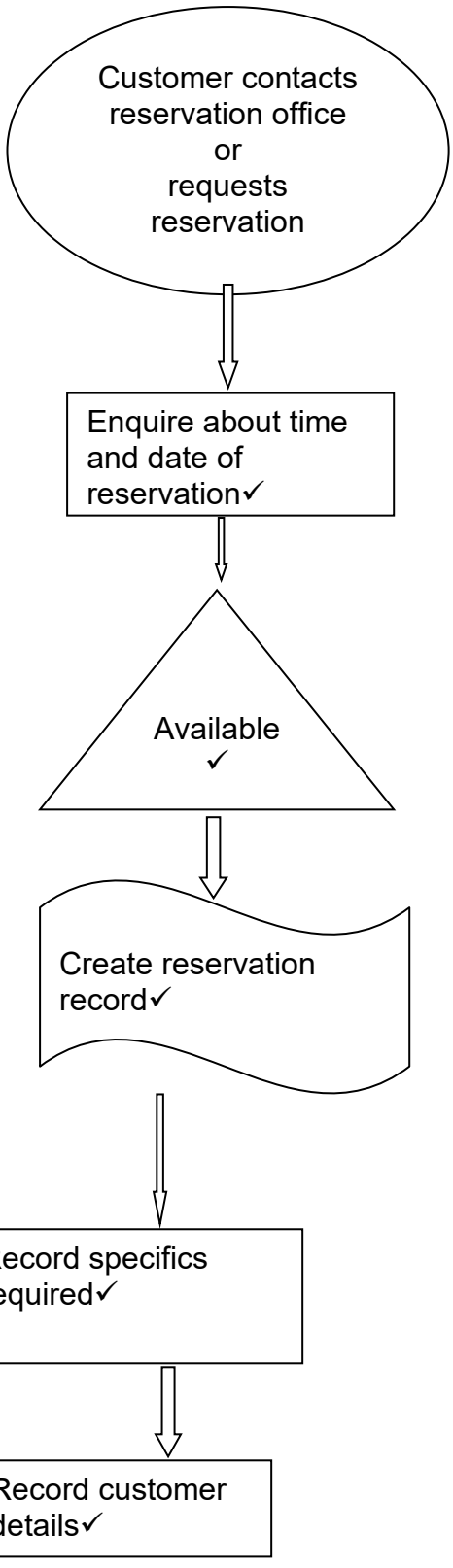
Comfort
One of the requirements for routing is certainly the comfort of passengers. This includes the extent of crowding, the length of queues, the time needed to stand without the availability of places to rest, the features of the transport vehicle, and the availability of shelter against the elements.

Speed of service
Because the popularity of public transport depends on the speed of the service, minimising passengers' time and energy plays a major role in transport planning. The speed of a service can be improved by selecting routes with favourable physical characteristics. For example, narrow streets with long and steep gradients and restricted parking severely affect traffic flow.

Traffic control
Routes where no or little traffic control is exercised, experience congestion and a variety of other traffic problems. Taxi drivers often take advantage of the lawlessness, which irritates other road users. (Any 4 × 2) (8)

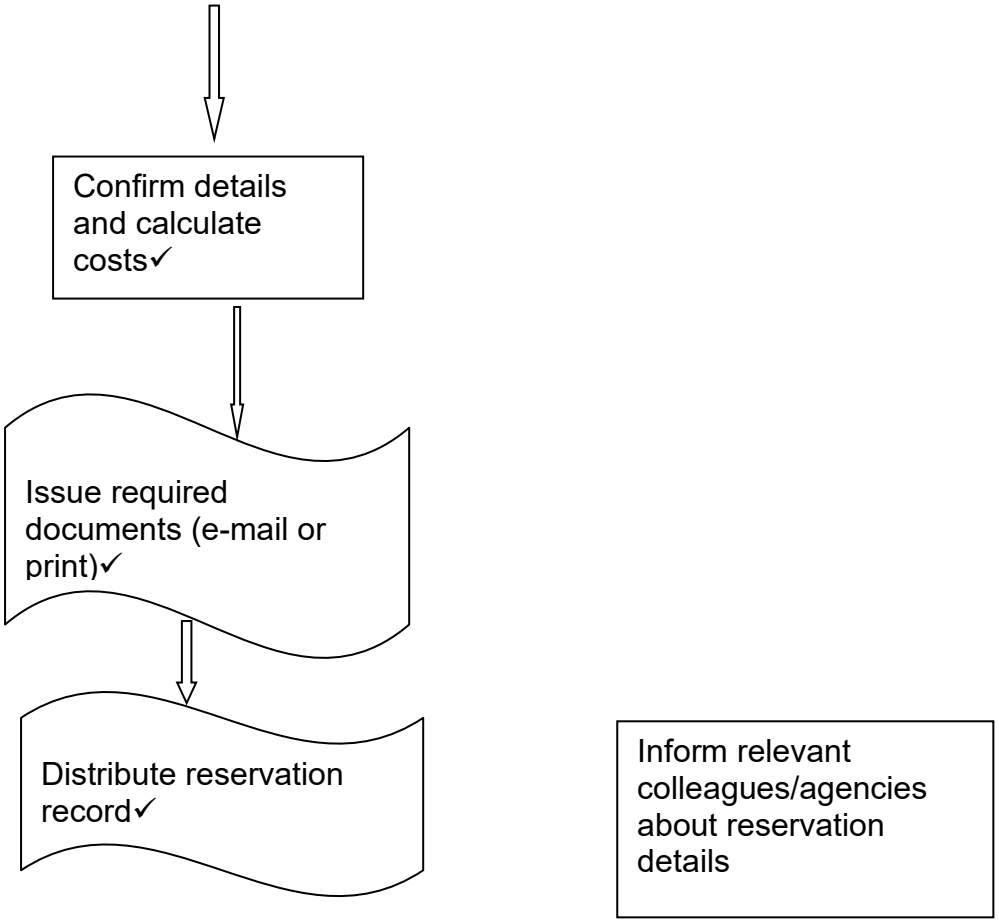
5.3

Diagram



Specifics include: date of arrival and departure, price class, the number of reservations required and any special requirements

Name, address, telephone number, e-mail address and method of payment



(9 × 1) (9)

5.4
- Private road transport includes all modes of road transport of selected people, usually not in exchange for a fare.✓✓
- Public transport refers to a shared passenger transportation service available to the general public.✓✓ (2 × 2) (4)

5.5 Passenger transport regulations
- Make structures available to assist with planning, implementation, funding, and the regulation and law enforcement of passenger transport.✓✓
- Encourage and plan for the use of non-motorised transport.✓✓
- Make the registration of all public transport operators compulsory.✓✓
- Replace operator permits with permissions for approved passenger transport plans.✓✓
- Promote and implement a system of regulated competition for public transport routes.✓✓ (5 × 2) (10)

[36]

QUESTION 6

6.1 Fixed costs are costs a company incurs when it is not producing any goods or services.✓✓ (2)

6.2 Procedure for handling expired tickets

- Refunds will be processed in accordance with the fare ruling on the ticket.
- All refunds are subject to an administration fee.
- The service fees charged are non-refundable.
- Expired tickets have no refund value if they are presented 12 months after the date printed on them.
- Document issue. However, the additional collection on a re-issued ticket will be refundable within 12 months.
- In South Africa and Mauritius service fees include VAT.

(Any 4 × 1) (4)

6.3 Evacuation rules

- Stay calm and follow the instructions of the person in control of the evacuation. This applies to both crew and passengers. It can be fatal if several crew members give different, opposing instructions.✓✓
- Female passengers are usually requested to take off their high-heeled shoes so that they can quickly get off a bus and move away from it.✓✓
- Most buses have floor lights to guide passengers to exits.
- During an aircraft evacuation, passengers must be shown how to put on their oxygen masks. Passengers must be constantly reminded to stay calm and breathe normally when a ship is evacuated. The maximum number of passengers per lifeboat must not be exceeded. Passengers should take their identification documents with them during an evacuation. Baggage must be left in a bus. Passengers may be required to exit through a bus window or an emergency exit.
- Use the exit hatch, which is usually in the roof above the centre aisle.
- A frightened person or child at the front of a queue who refuses to move may cause panic and jeopardise other passengers' safety. Crew members need to ensure that passengers keep moving once an evacuation has started.
- All loose clothing needs to be secured before evacuation so that it does not get caught in doors or any other part of the vehicle. Crew members need to be alert and assist passengers to prepare for evacuation.
- Passengers should be reminded to duck their heads upon leaving the vehicle so that they are not knocked unconscious in their haste to escape.

(Any 2 × 2) (4)
[10]

TOTAL SECTION B: 80
GRAND TOTAL: 100

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