higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

TRANSPORT OPERATIONS
NQF LEVEL 3

(11020323)

17 November 2023 (X-paper)
09:00–12:00

This question paper consists of 7 pages.

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)
TRANSPORT OPERATIONS
NQF LEVEL 3
TIME: 3 HOURS
MARKS: 100

INSTRUCTIONS AND INFORMATION

1. Answer all the questions.
2. Read all the questions carefully.
3. Number the answers according to the numbering system used in this question paper.
4. Start each section on a new page.
5. Use only a black or blue pen.
6. Write neatly and legibly.

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SECTION A

QUESTION 1

Complete the following sentences by choosing a word or words from the list below. Write only the answer next to the question number (1.1–1.10) in the ANSWER BOOK.

baggage handling; multiproduct pipelines; utility; sabotage; licence; place utility; contract; prequalified carrier databases; transtainer; road transport; rail; gantry; luggage; social issues; utilisation; electronic verification

1.1 … are the safest, most cost-effective and efficient means of moving petroleum products.

1.2 … offers flexibility, convenience and cost-effectiveness.

1.3 A/An … is a large device that is mounted on rails.

1.4 … can be seen as the availability of goods at a place where they are demanded to satisfy customers' needs.

1.5 The successful execution of transport projects, whether it is the transportation of people, freight or commodities, requires that contracts are awarded to competent contractors and this information can be found in …

1.6 … refers to the right to operate transport services within a specified territory.

1.7 … refer to most of the challenges that impact negatively on passenger transport.

1.8 Vehicle … normally varies between different times of the day and times of the year.

1.9 … is generally used for maritime and air transport tickets and is done with validation equipment.

1.10 Passengers may carry hand … to the weight of 7 kg.

(10 × 1) **[10]**

QUESTION 2

Choose a term from COLUMN B that matches a description in COLUMN A. Write only the letter (A–P) next to the question number (2.1–2.10) in the ANSWER BOOK.

COLUMN A		COLUMN B	
2.1	Restricted to the movement of passenger travelling for leisure purposes	A	grappler
2.2	Straddles the vehicle and positions the arms to lift the swap body	B	cellular container
2.3	Deals with the testing, inspection approval and maintenance of containers	C	cargo carriers
2.4	Impacts greatly on a company's operational efficiency budget, marketing and planning	D	maritime transportation
2.5	Costs not directly related to transport vehicles, but include costs for general management	E	common law
2.6	Includes the freedom to travel through a country to get to another destination	F	market and business factors
2.7	Claims for damages by a passenger who was injured while in the insured vehicle or care of the driver or operator	G	fixed costs
2.8	Determines service and safety standards	H	transit visas
2.9	Done with validation equipment	I	sea safety legislation
2.10	Includes a wide variety of items	J	road transport
		K	overhead
		L	transit privileges
		M	regulation of monopolies
		N	air transport tickets
		O	hazardous passenger items
		P	rail ticket

(10 × 1) **[10]**

TOTAL SECTION A: 20

SECTION B

QUESTION 3

PENSKE DCC SOLUTION IMPROVES DELIVERY SPEEDS AND FRESHNESS

Transporting food items requires extra care and expertise

Poultry producers navigate a complex array of supply and delivery challenges to ensure their food arrives fresh, wholesome and on time. When transporting poultry products, drivers must strictly adhere to the Food Safety Modernization Act (FSMA). Drivers must be highly trained in food safety and comply with expertise in material handling and storage. Further, the proper refrigerated trailer or refrigerated truck temperature must be maintained and monitored throughout the trip.

Given the need for highly trained drivers, well-maintained refrigerated trucks and trailers, and continuous trailer temperature monitoring, some producers are shifting transportation of their products from an in-house model to an outsourced transportation model run by a third-party logistics provider like Penske Logistics to implement what is called dedicated contract carriage (DCC).

Penske Logistics works with a leading poultry producer and handles transportation to and from up to seven processing plants, as well as a wide number of plants that perform cutting and trim processing. The supplier has a 24/7 operation to ensure their customers receive the freshest poultry products possible. The poultry producer needed a partner that was dependable, versatile and able to handle time-sensitive deliveries, as well as adhere to food safety, quality and FSMA requirements.

As an experienced logistics and supply chain partner with decades of experience in the food industry, Penske is able to increase the productivity of the food supply chain using the latest technology to help better plan daily operations. With both shuttle and over-the-road trucking operations, an extensive range of vehicles, including tractors and trailers, along with equipment maintenance tracking, Penske was able to get the poultry supplier up and running quickly once it elected to outsource the trucking operation. Overall, the poultry producer now experiences an 8% savings to their overall budget and a 15% reduction in driver turnover.

To meet the requirements, Penske established efficient truck routes and implemented more routine stops. Penske also provided an additional value-added service by allocating an extra driver once a month to follow through on new protocols designed to meet food integrity and freshness guidelines. The extra driver provides additional human resources to ensure trailer integrity and to make certain its food service is ready.

Understanding the importance of delivery preparation

To prepare for deliveries of groceries, Penske needs to schedule labour to ensure the availability staff to load and unload items from the truck and onto the store shelves. As a result, on-time deliveries are critical.

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Penske helps grocery stores prepare to receive deliveries by utilising innovative geofencing technology, whereby a truck's on-board computer sends an email alert to a store when a driver is within a certain range of the store. Follow-up alerts are then sent allowing store personnel to get organised and ready for delivery.

Penske also developed a mobile application to provide real-time visibility of ongoing shipments. With this app, the customer is able to view a map showing current locations of their vehicles, which improves management processes and technology, increases communication and yard control, and improves grocer satisfaction with quality products delivered on time.

[Adapted from: *www.penskelogistics.com*]

3.1	Name and explain the mode of transport that can be used to deliver poultry products.		(3)
3.2	Briefly explain THREE modal options than Penske can use.	(3 × 2)	(6)
3.3	List THREE intermodal road transport vehicles that can be added to the range of vehicles and trailers that Penske DCC use.	(3 × 2)	(6)
3.4	Give THREE advantages of unitised loads.		(3)
3.5	Name and describe THREE pieces of intermodal handling equipment.	(3 × 2)	(6)
			[24]

QUESTION 4

4.1	Name and explain THREE requirements for routing.	(3 × 2)	(6)
4.2	Briefly advise Penske DCC on the stress that chickens experience when being transported.		(4)
4.3	List FIVE electronic procurement systems that can add to geofencing technology.	(5 × 2)	(10)
4.4	State FOUR factors that influence transportation costs.		(4)
4.5	Give ONE criterion for prequalification of a carrier.		(1)
			[25]

QUESTION 5

5.1	Discuss, with examples, FOUR effects of congestion on passenger transport.		(4)
5.2	Distinguish between *private transport* and *public transport*.	(2 + 2)	(4)
5.3	Briefly state FOUR general guidelines for dealing with and handling cash.	(4 × 2)	(8)
5.4	Name FOUR procedures for handling expired tickets.		(4)
5.5	Explain FIVE general transport safety measures that Penske should consider.	(5 × 2)	(10)
5.6	Give ONE example of private transport.		(1)
			[31]

TOTAL SECTION B: 80
GRAND TOTAL: 100

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