higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)

TRANSPORT OPERATIONS
NQF LEVEL 4

(11020334)

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09:00–12:00

This question paper consists of 9 pages.

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DEPARTMENT OF HIGHER EDUCATION AND TRAINING
REPUBLIC OF SOUTH AFRICA

NATIONAL CERTIFICATE (VOCATIONAL)
TRANSPORT OPERATIONS
NQF LEVEL 4
TIME: 3 HOURS
MARKS: 150

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. Use only a black or blue pen.
5. Write neatly and legibly.

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SECTION A

QUESTION 1

Various options are given as possible answers to the following questions. Choose the correct answer and write only the letter (A–D) next to the question number (1.1–1.10) in the ANSWER BOOK.

1.1 Mathematical models are used to simulate production problems, to allow researchers to study all the relevant factors affecting a problem.

A Project-driven management
B Qualitative approach
C Quantitative approach
D Interrelation of systems

1.2 The cost implications when deciding where the facilities of the business should be located, include:

A transportation costs, production planning and service delivery
B direction, market and record sheets
C production planning, direction and overhangs
D market, service delivery and escort classes

1.3 The process whereby resources are combined and transformed in a controlled manner to add value, in accordance with policies of the company.

A Operations management
B Operations function
C Operations strategy
D Operations manager

1.4 Costs incurred in proportion to the activities of a business.

A Standing costs
B Overhead costs
C Fixed costs
D Variable costs

1.5 Issued for a single trip or a number of similar trips.

A Area-period permit
B Route-period permit
C Trip permit
D Countywide permit

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1.6 A/an … is a characteristically heavy-duty towing engine that provides motive power for hauling a towed or trailered load

A semi-trailer
B truck tractor
C modular trailer
D extendible semi-trailer

1.7 An abnormal vehicle warning board must be displayed at the …

A front of the abnormal vehicle only.
B rear ends of the abnormal vehicle only.
C two doors of the abnormal vehicle.
D front and the rear end of the abnormal vehicle.

1.8 The horizontal distance between the centres of the front and rear wheels.

A Overhang
B Stability
C Turning radius
D Wheelbase

1.9 The driver of a dangerous goods vehicle must:

A have a valid PrDP-D and must carry it on person where required.
B be registered as a dangerous goods owner and operator.
C create a policy for acceptance and storage of dangerous goods
D decide on the type and quantities of goods transported

1.10 This includes the statutory vehicle inspection requirements for all vehicles conveying dangerous goods.

A Driving Licence Testing Centre
B SANS 10229
C SANS 10230
D Manufacturer's ratings

(10 × 1) **[10]**

QUESTION 2

Indicate whether the following statements are TRUE or FALSE by writing only 'True' or 'False' next to the question number (2.1–2.5) in the ANSWER BOOK.

2.1 Policies are related activities that produce a specific service or product.

2.2 In South Africa, a taxi may be a 16-seater van or minibus.

2.3 A cost centre is a piece of equipment, location or even a person, against which certain specific costs are charged.

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2.4 An abnormal load is any substance or material capable of posing an unreasonable risk to health, safety, and property when transported.

2.5 Ground clearance is the amount of space between the base of a vehicle tyre and the underside of the chassis.

(5 × 1) **[5]**

QUESTION 3

Choose a term from COLUMN B that matches a description in COLUMN A. Write only the letter (A–G) next to the question number (3.1–3.5) in the ANSWER BOOK.

COLUMN A		COLUMN B	
3.1	A person who has been legally empowered to act on behalf of another person or an entity	A	risk assessment
3.2	An unpowered vehicle designed for connection to a tractor unit, truck or prime mover vehicle with strong traction power	B	agent
3.3	Process that determines whether it is feasible and cost effective to take on a specific job or operation	C	consignor
3.4	A large standardised container designed and built for intermodal transport	D	PrDP
3.5	A professional driving permit needed to drive public transport and heavy-duty vehicles, for example taxis, buses and breakdown vehicles	E	freight container
		F	dolly
		G	standard

(5 × 1) **[5]**

QUESTION 4

Briefly describe the meaning of the following words/phrases:

4.1 Services

4.2 Management theory

4.3 Packing group III

4.4 Duty of care

4.5 Precautionary principle (5 × 2) **[10]**

TOTAL SECTION A: 30

SECTION B

QUESTION 5

Read the text below and answer the questions that follow.

In the transport sector, systems thinking has led to an increased focus on the impact of transport externalities, such as air and noise pollution and land-use patterns, on the environment.

5.1 Draw a diagram to illustrate the various processes of a transport business from a systems perspective. Indicate the FOUR main components, and give examples for each component. (9)

5.2 Explain the strategic role of transport management and planning. (6)

5.3 Describe FOUR tasks that are usually performed by employees in the Human resource department. (4 × 2) (8)

5.4 Suggest TWO issues to consider when determining route schedules. (2)

5.5 Name FIVE modes of transport and briefly discuss how suitable each of the FIVE is to transport high value items. (5 × 2) (10)

[35]

QUESTION 6

6.1 Define the *decentralised distribution approach.* (3)

6.2 Summarise the impact of transport on other industries under the following headings:

6.2.1 Security and safety

6.2.2 Competition

(2 × 2) (4)

6.3 Explain FOUR characteristics of products that may influence the cost of transporting them. (4 × 2) (8)

6.4 Apart from your answer in QUESTION 6.3, list FIVE other elements that influence the cost of transporting goods. (5)

[20]

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QUESTION 7

Study the picture below and then answer the questions that follow.

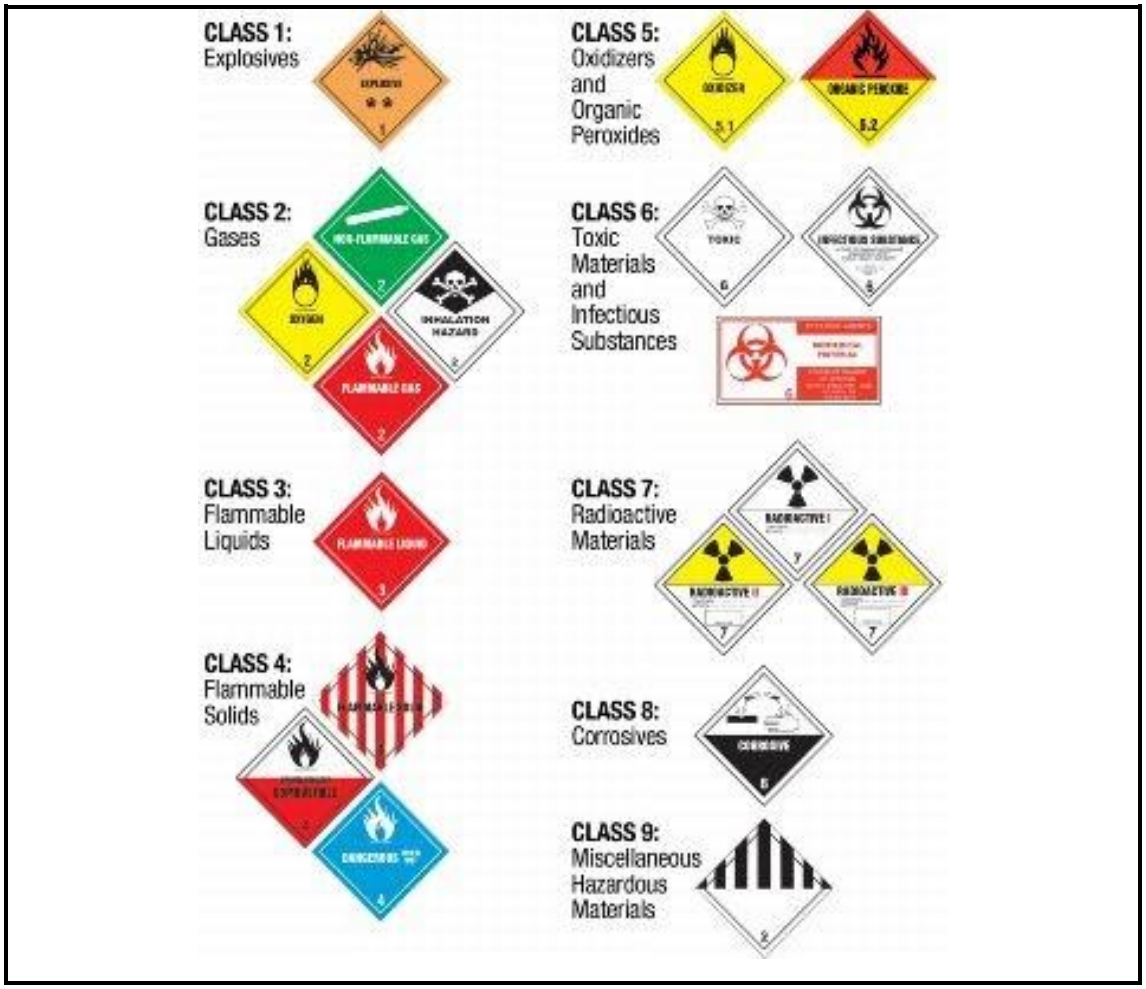


7.1	7.1.1	Identify the type of mobile crane in the picture above.	(1)
	7.1.2	Briefly describe the difference between the TWO types of abnormal loads carried by vehicles.	(7)
	7.1.3	Give any THREE requirements/limitations to consider for vehicles carrying abnormal mass loads on a public road. (3 × 2)	(6)
7.2		Describe FOUR legal requirements when using flags to mark abnormal loads on vehicles. (4 × 2)	(8)
7.3		Give FOUR responsibilities of the person monitoring the operations of abnormal loads. (4 × 2)	(8)
			[30]

QUESTION 8

Study the diagram below and then answer the questions.

8.1



8.1.1 List and define the dangerous substance in Class 3. (3)

8.1.2 Identify the TWO substances in Class 6. (2)

8.1.3 Give THREE examples of dangerous goods found in Class 9. (3)

8.1.4 Give the class number for explosives from the diagram above. (1)

8.2 Describe FIVE packaging methods used for safe transportation or storage of hazardous products. (5 × 2) (10)

8.3 The NRTR requires that drivers of all dangerous goods vehicles be trained by an accredited training provider.

Explain THREE items that must be included in the driver's syllabus. (3 × 2) (6)

8.4 Summarise the aspects that need to be included in a dangerous goods emergency plan under the following headings:

8.4.1 Scope

8.4.2 Table of contents

8.4.3 Definition of situation covered

8.4.4 Types of emergencies

8.4.5 Evacuation

(5 × 2) (10)
[35]

TOTAL SECTION B: 120
GRAND TOTAL: 150

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