UNIVERSITY OF JOHANNESBURG

QUALIFICATION	:	**B COM HONOURS**
MODULE	:	**ROAD TRANSPORT COSTING & DISTRIBUTION**
CODE	:	**VVR10X7/TRE8X10**
DATE	:	**5 NOVEMBER 2014 EXAM**
DURATION	:	**3 HOURS**
TIME	:	**08:30**
TOTAL MARKS	:	**180**

EXAMINER	:	**PROF. GC PRINSLOO**
MODERATOR	:	**PROF. JN CRONJE**
NUMBER OF PAGES	:	**5 Pages**

INSTRUCTIONS TO CANDIDATES:

- Answer all questions.
- Question papers must be handed in.
- This is a closed book assessment.
- Read the questions carefully and answer only what is asked.
- Number your answers clearly.
- Write neatly and legibly.
- Structure your answers by using appropriate headings and sub headings.
- The general University of Johannesburg policies, procedures and rules pertaining to written assessments apply to this assessment.

QUESTION 1 **(10 Marks)**

Complete the "*Vehicle Concepts*" description where required in your examination script (NOT ON QUESTION PAPER).

QUESTION 2 **(40 Marks)**

Complete the attached "*Vehicle Cost Schedule*".
(the use of a calculator is permitted)

QUESTIONS 3 **(10 Marks)**

Give formulae description for the follow Cost concepts:

a) Cost of Capital
b) Depreciation per annum
c) Insurance Cost
d) License Cost
e) Fuel Cost
f) CPK Maintenance
g) Fixed Cost per day
h) Annual Maintenance
i) Overheads administration
j) CPK Tyres

QUESTION 4 **(25 Marks)**

In the process of managing a Road Transport enterprise the Management normally utilyses two different sets of accounting information to steer the organisation. Illustrate how you will apply this statement in a Road Transport Enterprise of your choice with due attention to:

a) The users of the information and
b) The differences encountered between the two kinds of accounting Information.

QUESTION 5 **(25 Marks)**

In a Transport organisations a number of cost concepts are utilised which assist Management in the ultimate determination of prices and continuous cost management. Apply this statement to a Transport Organisation with due attention to:

a) Relevant costs and irrelevant costs,
b) Avoidable and unavoidable cost,
c) Sunk cost,
d) Opportunity cost,
e) Incremental and marginal cost

QUESTION 6 **(25 Marks)**

Transport Enterprises utilise state of the art systems to determine costs. This has been practice over the last decades. Apply this statement in a Road Transport Organisation and give a comparison between Traditional and ABC systems.

QUESTION 7 **(20 Marks)**

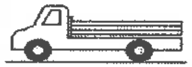
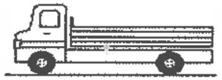
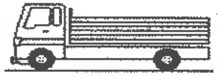
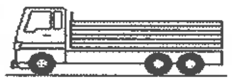
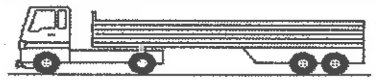
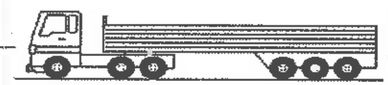
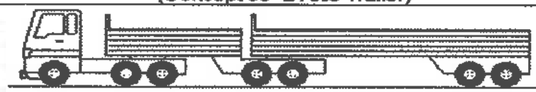
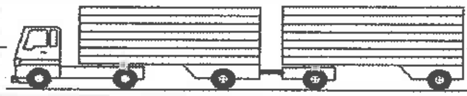
Investment in a Transport Operation is judged by the same parameters as an investment in any other business venture. By using the following concepts Explain how you will utilised it for such judgement on investment:

a) Compounding and discounting
b) Nett present value
c) Internal rate of return.

QUESTION 8 **(25 Marks)**

Budgets form the backbone of an organisation's financial planning, direct future business and serve as an objective against which output is measured. Critically evaluate the different stages in the budgeting process.

VEHICLE CONCEPTS

01	 (2400 kg or Less)	Permissible Unladen PAYLOAD up to	2 400 1 400 1 000
02	 (2400 to 5000 kg)	Permissible Unladen PAYLOAD up to	5 000 2 680 2 320
03	 (5001 to 7500 kg)	Permissible Unladen PAYLOAD up to	7 000 3 100 3 900
04	 (7501 to 10000 kg)	Permissible Unladen PAYLOAD up to	10 000 4 210 5 790
05		Permissible Unladen PAYLOAD up to	13 700 5 610 8 090
06		Permissible Unladen PAYLOAD up to	24 000 8 660 15 340
07	 (4x2 TT+Single Axle ST)	Permissible Unladen PAYLOAD up to	25 000 10 720 14 280
08	 (4x2 TT+Tandem Axle ST)	Permissible Unladen PAYLOAD up to	34 000 14 440 19 560
09	 (6x4 TT+Tandem Axle ST)	Permissible Unladen PAYLOAD up to	43 000 16 250 26 750
10	 (4x2 TT+Tridem Axle ST)	Permissible Unladen PAYLOAD up to	40 000 15 420 24 580
11	 (6x4 TT+Tridem Axle ST)	Permissible Unladen PAYLOAD up to	49 500 17 520 31 980
12	 (4x2 Rigid+2 Axle Trailer)	Permissible Unladen PAYLOAD up to	28 000 11 400 16 600
13	 (6x4 Rigid+2 Axle Trailer)	Permissible Unladen PAYLOAD up to	43 000 15 780 27 220
14	 (6x4 Rigid+4 Axle Trailer)	Permissible Unladen PAYLOAD up to	55 200 19 680 35 520
15	 (Doubles Combination)	Permissible Unladen PAYLOAD up to	43 000 17 150 25 850
16	 (Concept 08+2 Axle Trailer)	Permissible Unladen PAYLOAD up to	44 000 19 550 24 450
17	 (Concept 09+2 Axle Trailer)	Permissible Unladen PAYLOAD up to	56 000 21 730 34 270
18	 (6x4 TT+Tandem/Tandem ST)	Permissible Unladen PAYLOAD up to	56 000 22 125 33 875
19	 (6x4 TT+T[illegible] Tandem ST)	Permissible Unladen PAYLOAD up to	56 000 23 180 32 820
20 PMA		Permissible Unladen PAYLOAD up to	13 700 5 390 8 310
21 PMA	 Four Axle Artic (4x2 TT+Tandem Axle ST)	Permissible Unladen PAYLOAD up to	34 000 13 650 20 350
22 PMA	 Five Axle Artic (Doubles Combination)	Permissible Unladen PAYLOAD up to	43 000 18 350 24 650

Concept - 15
Five Axle Combination
Doubles Combination
DROPSIDE Body

ANNUAL FIXED (STANDING) COSTS	R	cpk	%	%
Cost of Capital (Finance)				
Depreciation				
Insurance				
On Vehicle Staff	432 715	393.4	46.0%	20.4%
Overheads - Administration				
Overheads - Operational				
Licence	17 220	15.7	1.8%	0.8%
Other	0	0.0	0.0%	0.0%
TOTAL ANNUAL FIXED COSTS	940 157	854.7	100.0%	44.2%

VARIABLE (RUNNING) COSTS	R	cpk	%	%
Fuel	718 352			
Lubricants				
Maintenance	257 915			
Tyres	191 315			
Other	0	0.0	0.0%	0.0%
TOTAL VARIABLE COSTS	1 185 541		100.0%	55.8%
TOTAL ANNUAL COSTS	2 125 698	1 932.5	—	100.0%

COST SUMMARY	From Total Annual Fixed Cost	Variable Cost	Total Cost
Cost per Day R			
Cost per Hour R			
Cent / Ton . km At 70.0% Payload Utilisation and 75.0% Annual Laden km	63.0	79.4	142.4

INDICES and INCREASES	INDICES RFA 20 Base Mar 99 = 1000	INCREASES From Edition RFA 48
Total Annual Fixed Cost	3074	7.1%
Finance + Depreciation	1799	6.4%
On Vehicle Staff	4154	8.0%
Total Variable Cost	6229	5.3%
Fuel Cost	6530	5.5%
Maintenance Cost	5366	5.0%

% INCREASE / DECREASE	Annual From Edition RFA 47	Previous From Edition RFA 48
Total Annual Fixed Cost	8.3%	7.1%
Total Variable cost - Incl Fuel & Oil	10.2%	5.3%
Total Variable cost - Excl Fuel & Oil	8.7%	4.9%
Total Annual Cost - Incl Fuel & Oil	9.3%	6.1%
Total Annual Cost - Excl Fuel & Oil	8.4%	6.4%

ASSUMPTIONS : Concept - 15
Five Axle Combination Doubles Combination
DROPSIDE Body Apr-14

PRIME MOVER OR RIGID					
Cost Price (excl VAT)				R	880 600
Residual Value				%	25.0%
Finance - Cost of Capital (Interest)				%	9.0%
- or Monthly Repayment				R	0
Depreciation - Distance km	0	or	Time	yrs	5.0
Insurance (% of Cost Price)				%	7.5%
Tare	7 550	kg	Licence	R	8 976
Number of Steering Axle(s)				no	1
Number of Tyres (excl spare)				no	6
Tyre Size				-	315/80R22.5
Tyre Price - New Tyre (excl VAT)				R	18 422
- Retread (excl VAT)				R	2 589
New Tyre Life - Front & Rear	80 000			km	100 000
Retread Tyre Life - Front & Rear	80 000			km	100 000
Number of Retreads - Front & Rear	0.0			no	2.0
TRAILERS OR SEMI TRAILERS					
Cost Price (excl VAT) (1st + 2nd Trailer)				R	637 430
Residual Value				%	0.0%
Finance - Cost of Capital (Interest)				%	9.0%
- or Monthly Repayment				R	0
Depreciation - Time				yrs	10.0
Insurance (% of Cost Price)				%	5.0%
Tare - First Trailer	4 350	kg	Licence	R	3 636
Tare - Second Trailer	5 250	kg	Licence	R	4 608
Number of Axle(s)				no	3
Number of Tyres (excl spares)				no	12
Tyre Size				-	315/80R22.5
Tyre Price - New Tyre (excl VAT)				R	18 422
- Retread (excl VAT)				R	2 353
New tyre life				km	120 000
Retread tyre life				km	120 000
Number of Retreads				no	2.0
ON VEHICLE STAFF					
Drivers - No & Monthly Cost	no	1		R	25 569
Assistants - No & Monthly Cost	no	1		R	10 491
ANNUAL FIXED OVERHEADS					
Administration				R	103 424
Operational				R	68 949
Other Fixed Standing Costs				R	0
VARIABLE COSTS					
Fuel Consumption				Litre / 100 km	49.0
Fuel Price				Cent / Litre	1 332.8
Lubricants (as % of fuel cost)				%	2.5%
Maintenance				cpk	234.5
Other Variable Running Costs				cpk	0.0
UTILISATION					
Annual Kilometres				km	110 000
Payload Utilisation & Annual Laden km	%	70.0%		%	75.0%
Days Worked per Annum				days	245
Chargeable Hours per Work Day				hrs	12.0

15-5 Axle Doubles — Average Payload 25.9 Ton