

**RSK2601**

( 481957)

May/June 2013

**ENTERPRISE RISK MANAGEMENT**

Duration 2 Hours

70 Marks

 EXAMINERS  
 FIRST  
 SECOND

 MRS AT MUTEZO  
 MS CJ DE SWARDT

Use of a non-programmable pocket calculator is permissible

Closed book examination

This examination question paper remains the property of the University of South Africa and may not be removed from the examination venue

This paper consists of 16 pages in total plus instructions for completing a mark-reading sheet

This paper comprises two sections, A and B

Section A consists of forty multiple choice questions that each counts 1 mark. The answers to these questions must be indicated on the mark-reading sheet provided. Write your student number and the unique number **481957** on the mark-reading sheet

Section B comprises THREE paragraph/calculation type questions. Each question counts 10 marks. Section B must be answered in the designated areas on pages 11 to 14

**THIS PAPER REMAINS THE PROPERTY OF THE UNIVERSITY OF SOUTH AFRICA AND MAY NOT BE REMOVED FROM THE EXAMINATION ROOM**

**Please note:**

- 1 This is a fill-in examination paper and there is no need for any examination scripts. Students must hand over the examination paper to the invigilator before leaving the examination hall. Students must answer the questions in Section B in the spaces provided on the examination paper
- 2 Any silent, non-programmable, battery-operated pocket calculator may be used.
- 3 Pages for rough work have been provided (see pages 15 and 16). No rough work will be marked.

**[TURN OVER]**

**SECTION A: MULTIPLE-CHOICE QUESTIONS**

**This section consists of 40 multiple choice questions. Use the mark-reading sheet provided to indicate your answers.**

1 Mr A ignores a red traffic light and collides with an oncoming vehicle. Mr A's negligent behaviour is referred to as a

- 1 moral hazard
- 2 legal hazard
- 3 human peril
- 4 risk

2 The standard deviation is

- 1 a measure of central tendency
- 2 obtained by multiplying each outcome by the probability of its occurrence
- 3 a measure of dispersion around the expected value
- 4 a measure of dispersion useful in comparing the risk of probability distributions with different expected returns

3 An authorised strike by truck drivers in South Africa can be classified as a(n)

- 1 particular event risk
- 2 incidental risk
- 3 fundamental event risk
- 4 unsystematic risk

4 Which of the following are associated with subjective uncertainty?

- a Accidents
- b Natural sciences
- c Poker card games
- d Fire

**Choose the correct combination.**

- 1 all of the above
- 2 a, c, d
- 3 a, d
- 4 b, c

5 Operating leverage

- 1 is an element of core business risks of a manufacturing concern
- 2 is measured by the percentage fixed costs that goes into the production of goods
- 3 represents an unsystematic risk element to a manufacturing concern
- 4 relies on the production function of a manufacturing concern

**[TURN OVER]**

**Choose the correct combination.**

- 1 a, b, c, d
- 2 a, b, d
- 3 a, c, d
- 4 c, d

6 Core business risks to a financial institution include amongst others the following

- a Interest rate fluctuation
- b Variability of profit margin
- c Variability of cost
- d Currency movement

**Choose the correct combination.**

- 1 a, b, c, d
- 2 a, d
- 3 b, c, d
- 4 a, b, d

7 The traditional approach to risk management is characterised by

- a risk balkanisation
- b a silo mentality towards managing risks
- c the proactive management of risks
- d managing risks in cost centres

**Choose the correct combination.**

- 1 a, b, c, d
- 2 b, c, d
- 3 a, b, d
- 4 c, d

8 A business invests R10 000 in a fixed interest security with a coupon rate of 15 percent, repayable after five years. With this particular investment the business is exposed to risk

- 1 interest rate
- 2 liquidity
- 3 investment
- 4 credit

**[TURN OVER]**

9 A South African bank has more US Dollars in liabilities than Rands. A depreciation of the US Dollar against the Rand will expose the bank to \_\_\_\_\_ risk.

- 1 interest rate
- 2 liquidity
- 3 investment
- 4 currency

10 Alternative risk transfer techniques (ART)

- a involve the transfer of risk to capital markets
- b give investment banks a new field of activities
- c create opportunities for non-financial enterprises to transfer risk at lower cost
- d provide insurance companies with an extension of their capacity base

**Choose the correct combination.**

- 1 a, b, c
- 2 b, c, d
- 3 a, c, d
- 4 a, b, c, d

11 Enterprise risk management is characterised by a

- 1 narrow focus on hazard risks
- 2 comprehensive, inclusive and proactive approach to risk management
- 3 functional approach to risk management responsibilities
- 4 lack of consistency in terms of level of detail and reporting formats

12 Poor data integrity is an example of \_\_\_\_\_ risk.

- 1 operational
- 2 fundamental
- 3 investment
- 4 currency

13 When formulating risk management policies, management should address the following aspects

- a Responsibilities of risk oversight personnel
- b Approved methodologies for measuring risks
- c Risk tolerance levels
- d The relevant risk authorities in terms of commitment of resources to high-risk activities

**[TURN OVER]**

**Choose the correct combination**

- 1 a, b, c, d
- 2 a, b, c
- 3 a, b, d
- 4 b, c, d

## 14 Enterprise Risk Management

- a exclusively assesses upside risks
- b focuses on tangible and intangible assets
- c is embedded in the processes and structures of the enterprise
- d is a reactive approach to risk management

**Choose the correct combination**

- 1 a, b, c, d
- 2 a, c, d
- 3 a, b, d
- 4 b, c

## 15 Good corporate governance

- a ensures the adherence to legislation
- b assists with the protection of scarce resources
- c guarantees improved corporate performance
- d enhances environmental responsibility

**Choose the correct combination.**

- 1 a, b, c, d
- 2 a, c, d
- 3 b, c, d
- 4 a, b, c

## 16 The focussed risk management model

- 1 provides for a Chief Risk Officer (CRO) who oversees the management of all risk types
- 2 is more suitable for manufacturing concerns
- 3 appoints the CRO as the champion of the business risk management model
- 4 is more suited for use by financial institutions

## 17 In terms of the generic enterprise risk oversight structure the .

- 1 chief executive officer defines the enterprise's risk priorities
- 2 business risk management function establishes an integrated framework for managing risks
- 3 risk management executive committee validates risk management measures
- 4 business units enforce policy and limits on risks

**[TURN OVER]**

18 In terms of good corporate governance

- a risk identification should be directed in the context of the company's purpose
- b the CEO should approve the company's chosen risk philosophy
- c the Chief Risk Officer should be responsible for the process of risk management
- d risk assessment should be done periodically

**Choose the correct combination.**

- 1 a, b, c, d
- 2 a, d
- 3 b, c, d
- 4 a, b, d

19 The implementation of an Enterprise Risk Management approach in organisations may be hampered by

- a the adversarial relationship between line managers and staff risk managers
- b improper yardsticks used to measure success in an organisation
- c a weak risk culture
- d proceeding incrementally in implementing ERM

**Choose the correct combination.**

- 1 a, b, c, d
- 2 a, b, c
- 3 a, b, d
- 4 b, c, d

**Answer the next question by making use of the following:**

Probability	Outcome
0 20	R100
0 50	R200
0 30	R300

20 The expected value is

- 1 R100
- 2 R200
- 3 R210
- 4 R300

21 SWOT analysis

- 1 is primarily used to evaluate event risks
- 2 can be of assistance to insurance intermediaries
- 3 graphically represents any form of flow within and to the enterprise
- 4 identifies risks in the internal and external enterprise environment

**[TURN OVER]**

- 22 Risk forms the basis from which insurers ultimately calculate premium requirements and determine the extent to which they are prepared to insure the client
- 1 identification
  - 2 evaluation
  - 3 financing
  - 4 monitoring
- 23 Indicate the **correct** statement
- 1 Maximum possible loss is the highest loss that could result from a single event under unfavourable conditions
  - 2 Normal loss expectancy describes the extent to which various risks could accumulate into a large loss as a result of the operation of a single event
  - 3 "As if" analysis takes full cognisance of the real value of an asset
  - 4 Business interruption entails a specific analysis of the past history of an organisation
- 24 Ezweni Company has three identical manufacturing plants, one on the Atlantic Coast, one on the Pacific coast, and one in Eastern Cape. Each plant is valued at R50 million. Ezweni's risk manager is concerned about the damage which could be caused by a single cold front. The risk manager believes there is an extremely low probability that a single cold front could destroy more than one plant because they are located so far apart. What is the maximum *possible* loss associated with a single cold front?
- 1 R0 million
  - 2 R50 million
  - 3 R100 million
  - 4 R150 million
- 25 Risk avoidance as a risk control technique is best suited for losses
- 1 low-frequency, low-severity
  - 2 low-frequency, high-severity
  - 3 high-frequency, low-severity
  - 4 high-frequency, high-severity
- 26 Which of the following fire losses would you regard as the most serious?
- 1 R5 million which occurs every ten years
  - 2 R3 million which occurs every seven years
  - 3 R1 million which occurs every three years
  - 4 R5 million which occurs every seventeen years

- 27 A manufacturing firm identified that it would have difficulties sourcing raw materials locally, so it decided to relocate its production facilities. According to Enterprise Risk Management (ERM), this decision represents which of the following responses to risk?
- 1 Risk reduction
  - 2 Risk assumption
  - 3 Risk sharing
  - 4 Risk acceptance
- 28 Collins Van Lines requires each of their truck drivers to complete a driver safety course each year. Requiring drivers to complete a driver safety course is an example of risk
- 1 retention
  - 2 transfer
  - 3 avoidance
  - 4 control
- 29 Futures contracts are all \_\_\_\_\_ - based contracts, while forward and swap contracts are \_\_\_\_\_ - based contracts
- 1 Over-the-counter, exchange
  - 2 Exchange, over-the-counter
  - 3 Commodity, financial
  - 4 Long-term, short-term
- 30 A futures contract
- 1 is an agreement to buy or sell a specified amount of an asset at the spot price on the expiration date of the contract
  - 2 is an agreement to buy or sell a specified amount of an asset at a predetermined price on the expiration date of the contract
  - 3 gives the buyer the right, but not the obligation, to buy an asset sometime in the future
  - 4 is a contract to be signed in the future by the buyer and the seller of the commodity
- 31 The price that the buyer of the option pays to acquire the option is called the
- 1 strike price
  - 2 exercise price
  - 3 execution price
  - 4 premium

**[TURN OVER]**



**USE THE FOLLOWING INFORMATION TO ANSWER QUESTIONS 32 TO 34**

An organisation uses short-term finance by issuing bankers' acceptances. The treasurer expects short-term interest rates to rise and wants to hedge the next BA-rollover by buying a FRA at 15, 85%. Assume the following applies

Nominal amount	R500, 000
Rollover date	15 August
Settlement date	15 April
Spot rate on 15 August	18, 5%
FRA spot (bid/offer)	15, 0/15, 5%
Number of days in the year	365

32 The cost of the issuing of the banker's acceptances will be

- 1 R30, 410 96
- 2 R38, 219 18
- 3 R25, 479 45
- 4 R45, 616 44

33 In order to lock in a discount rate of 15, 5%

- 1 the company will have to receive an amount of R3 698, 63 from the other party to the transaction
- 2 the company will have to pay over an amount of R3 698, 63 to the other party of the transaction
- 3 the business will have to receive an amount of R4 931, 51 from the other party to the transaction
- 4 the company will have to pay over an amount of R4 931, 51 to the other party of the transaction

34 The cost of the roll-over to the company (holder of the FRA) amounts to

- 1 R45 616, 44
- 2 R25 479, 45
- 3 R41 095, 90
- 4 R26 712, 33

35 Which one of the following is a major component of the enterprise risk management (ERM) framework?

- 1 Risk appetite
- 2 Oversight structure
- 3 Architecture
- 4 Strategy

[TURN OVER]

- 36 Which one of the following dictates the nature and level of risks that are acceptable to the enterprise and its various business units?
- 1 Capital-at-risk
  - 2 Risk appetite
  - 3 Value proposition
  - 4 Risk strategy
- 37 Which one of the following limits is often used as management triggers for re-evaluating the wisdom of continuing to hold certain positions before they suffer some pre-defined maximum threshold level of losses?
- 1 Value-at-risk
  - 2 risk sensitivity
  - 3 stress/scenario
  - 4 stop loss/advisory
- 38 Which one of the following techniques is used to determine the highest amount of money a portfolio could lose in a period of time at a certain confidence level?
- 1 Value-at-risk
  - 2 Risk-adjusted return on capital
  - 3 Cash flow at risk
  - 4 Earnings at risk
- 39 Which one of the following is an enabler of continuous improvement philosophy in risk monitoring?
- 1 Identification of emerging risks
  - 2 Benchmarking of performance to identify best practices
  - 3 Including and emphasising learning in strategic plans
  - 4 Measuring of the actual performance
- 40 Risk-adjusted return on capital
- 1 measures performance, taking into account the risks inherent in a portfolio
  - 2 incorporates the riskiness of business activity into the measurement of the expected return from that activity
  - 3 strengthens the links between performance, accountability and established risk thresholds
  - 4 screens capital projects when using discounted cash flow techniques

[40 X 1 = 40 marks]

[TURN OVER]

**SECTION B: PARAGRAPH QUESTIONS AND CALCULATIONS****Question 1 (10 marks)**

Assume the following hypothetical distribution of possible losses due to fire at two separate premises of a business

**PREMISES A**

OUTCOME	AMOUNT OF LOSS	PROBABILITY OF OUTCOME
A	R10 000	0,8
B	R15 000	0,2

**PREMISES B**

OUTCOME	AMOUNT OF LOSS	PROBABILITY OF OUTCOME
A	R10 000	0,50
B	R15 000	0,50

You are required to determine the following variables for the above set of outcomes **Show all calculations.**

1 1 The expected outcome of premises B

1 2 The variance of Premises A

1 3 The standard deviation of Premises B

[TURN OVER]





3 2 Suppose borrower A can obtain R2 million for ten years at a floating rate of prime plus 0, 8% but that he has to pay a fixed rate of 18% on a debenture for the same term Borrower B can borrow floating funds at the prime rate and fixed rate funds at 15% Borrower A and B agree to enter into a swap agreement in which borrower A agrees to pay an additional 2% interest premium to borrower B

3 2 1 With regard to the aforementioned scenario, determine the effective cost of borrowing for both participants to the swap Show all calculations 3


3 2 2 Highlight two purposes of swap transactions 2


[3 x 10 = 30 marks]  
TOTAL MARKS: 70

[TURN OVER]

**DO YOUR ROUGH WORK HERE.  
NO ROUGH WORK WILL BE MARKED.**

**[TURN OVER]**

**DO YOUR ROUGH WORK HERE.  
NO ROUGH WORK WILL BE MARKED.**



**PART 1 (GENERAL/ALGEMEEN) DEEL 1**

STUDY UNIT e.g. PSY100 X  
 STUDIE EENHEID by PSY100 X

--	--	--	--	--	--	--	--	--	--

PAPER NUMBER  
 VRAESTELNOMMER

STUDENT NUMBER  
 STUDENTENOMMER

--	--	--	--	--	--	--	--	--	--

c0	c0	c0	c0	c0	c0	c0	c0
c1	c1	c1	c1	c1	c1	c1	c1
c2	c2	c2	c2	c2	c2	c2	c2
c3	c3	c3	c3	c3	c3	c3	c3
c4	c4	c4	c4	c4	c4	c4	c4
c5	c5	c5	c5	c5	c5	c5	c5
c6	c6	c6	c6	c6	c6	c6	c6
c7	c7	c7	c7	c7	c7	c7	c7
c8	c8	c8	c8	c8	c8	c8	c8
c9	c9	c9	c9	c9	c9	c9	c9

INITIALS AND SURNAME  
 VOORLETTERS EN VAN

DATE OF EXAMINATION  
 DATUM VAN EKSAMEN

EXAMINATION CENTRE (E.G. PRETORIA)  
 EKSAMENSENTRUM (BY PRETORIA)

UNIQUE PAPER NO  
 UNIEKE VRAESTEL NR

--	--	--	--	--	--	--	--

c0	c0	c0	c0	c0	c0	c0	c0
c1	c1	c1	c1	c1	c1	c1	c1
c2	c2	c2	c2	c2	c2	c2	c2
c3	c3	c3	c3	c3	c3	c3	c3
c4	c4	c4	c4	c4	c4	c4	c4
c5	c5	c5	c5	c5	c5	c5	c5
c6	c6	c6	c6	c6	c6	c6	c6
c7	c7	c7	c7	c7	c7	c7	c7
c8	c8	c8	c8	c8	c8	c8	c8
c9	c9	c9	c9	c9	c9	c9	c9

For use by examination invigilator  
 Vir gebruik deur eksamenopsiener

**IMPORTANT**

- USE ONLY AN HB PENCIL TO COMPLETE THIS SHEET
- MARK LIKE THIS
- CHECK THAT YOUR INITIALS AND SURNAME HAS BEEN FILLED IN CORRECTLY
- ENTER YOUR STUDENT NUMBER FROM LEFT TO RIGHT
- CHECK THAT YOUR STUDENT NUMBER HAS BEEN FILLED IN CORRECTLY
- CHECK THAT THE UNIQUE NUMBER HAS BEEN FILLED IN CORRECTLY
- CHECK THAT ONLY ONE ANSWER PER QUESTION HAS BEEN MARKED
- DO NOT FOLD

**BELANGRIK**

- GEBUIK SLEGS 'N HB POTLOOD OM HIERDIE BLAD TE VOL TOOI
- MERK AS VOLG
- KONTROLEER DAT U VOORLETTERS EN VAN REG INGEVUL IS
- VUL U STUDENTENOMMER VAN LINKS NA REGS IN
- KONTROLEER DAT U DIE KORREKTE STUDENTENOMMER VERSTREK HET
- KONTROLEER DAT DIE UNIEKE NUMMER REG INGEVUL IS
- MAAK SEKER DAT NET EEN ALTERNATIEF PER VRAAG GEMERK IS
- MOENIE VOU NIE

**PART 2 (ANSWERS/ANTWOORDE) DEEL 2**

1	c1	c2	c3	c4	c5
2	c1	c2	c3	c4	c5
3	c1	c2	c3	c4	c5
4	c1	c2	c3	c4	c5
5	c1	c2	c3	c4	c5
6	c1	c2	c3	c4	c5
7	c1	c2	c3	c4	c5
8	c1	c2	c3	c4	c5
9	c1	c2	c3	c4	c5
10	c1	c2	c3	c4	c5
11	c1	c2	c3	c4	c5
12	c1	c2	c3	c4	c5
13	c1	c2	c3	c4	c5
14	c1	c2	c3	c4	c5
15	c1	c2	c3	c4	c5
16	c1	c2	c3	c4	c5
17	c1	c2	c3	c4	c5
18	c1	c2	c3	c4	c5
19	c1	c2	c3	c4	c5
20	c1	c2	c3	c4	c5
21	c1	c2	c3	c4	c5
22	c1	c2	c3	c4	c5
23	c1	c2	c3	c4	c5
24	c1	c2	c3	c4	c5
25	c1	c2	c3	c4	c5
26	c1	c2	c3	c4	c5
27	c1	c2	c3	c4	c5
28	c1	c2	c3	c4	c5
29	c1	c2	c3	c4	c5
30	c1	c2	c3	c4	c5
31	c1	c2	c3	c4	c5
32	c1	c2	c3	c4	c5
33	c1	c2	c3	c4	c5
34	c1	c2	c3	c4	c5
35	c1	c2	c3	c4	c5

36	c1	c2	c3	c4	c5
37	c1	c2	c3	c4	c5
38	c1	c2	c3	c4	c5
39	c1	c2	c3	c4	c5
40	c1	c2	c3	c4	c5
41	c1	c2	c3	c4	c5
42	c1	c2	c3	c4	c5
43	c1	c2	c3	c4	c5
44	c1	c2	c3	c4	c5
45	c1	c2	c3	c4	c5
46	c1	c2	c3	c4	c5
47	c1	c2	c3	c4	c5
48	c1	c2	c3	c4	c5
49	c1	c2	c3	c4	c5
50	c1	c2	c3	c4	c5
51	c1	c2	c3	c4	c5
52	c1	c2	c3	c4	c5
53	c1	c2	c3	c4	c5
54	c1	c2	c3	c4	c5
55	c1	c2	c3	c4	c5
56	c1	c2	c3	c4	c5
57	c1	c2	c3	c4	c5
58	c1	c2	c3	c4	c5
59	c1	c2	c3	c4	c5
60	c1	c2	c3	c4	c5
61	c1	c2	c3	c4	c5
62	c1	c2	c3	c4	c5
63	c1	c2	c3	c4	c5
64	c1	c2	c3	c4	c5
65	c1	c2	c3	c4	c5
66	c1	c2	c3	c4	c5
67	c1	c2	c3	c4	c5
68	c1	c2	c3	c4	c5
69	c1	c2	c3	c4	c5
70	c1	c2	c3	c4	c5

71	c1	c2	c3	c4	c5
72	c1	c2	c3	c4	c5
73	c1	c2	c3	c4	c5
74	c1	c2	c3	c4	c5
75	c1	c2	c3	c4	c5
76	c1	c2	c3	c4	c5
77	c1	c2	c3	c4	c5
78	c1	c2	c3	c4	c5
79	c1	c2	c3	c4	c5
80	c1	c2	c3	c4	c5
81	c1	c2	c3	c4	c5
82	c1	c2	c3	c4	c5
83	c1	c2	c3	c4	c5
84	c1	c2	c3	c4	c5
85	c1	c2	c3	c4	c5
86	c1	c2	c3	c4	c5
87	c1	c2	c3	c4	c5
88	c1	c2	c3	c4	c5
89	c1	c2	c3	c4	c5
90	c1	c2	c3	c4	c5
91	c1	c2	c3	c4	c5
92	c1	c2	c3	c4	c5
93	c1	c2	c3	c4	c5
94	c1	c2	c3	c4	c5
95	c1	c2	c3	c4	c5
96	c1	c2	c3	c4	c5
97	c1	c2	c3	c4	c5
98	c1	c2	c3	c4	c5
99	c1	c2	c3	c4	c5
100	c1	c2	c3	c4	c5
101	c1	c2	c3	c4	c5
102	c1	c2	c3	c4	c5
103	c1	c2	c3	c4	c5
104	c1	c2	c3	c4	c5
105	c1	c2	c3	c4	c5

106	c1	c2	c3	c4	c5
107	c1	c2	c3	c4	c5
108	c1	c2	c3	c4	c5
109	c1	c2	c3	c4	c5
110	c1	c2	c3	c4	c5
111	c1	c2	c3	c4	c5
112	c1	c2	c3	c4	c5
113	c1	c2	c3	c4	c5
114	c1	c2	c3	c4	c5
115	c1	c2	c3	c4	c5
116	c1	c2	c3	c4	c5
117	c1	c2	c3	c4	c5
118	c1	c2	c3	c4	c5
119	c1	c2	c3	c4	c5
120	c1	c2	c3	c4	c5
121	c1	c2	c3	c4	c5
122	c1	c2	c3	c4	c5
123	c1	c2	c3	c4	c5
124	c1	c2	c3	c4	c5
125	c1	c2	c3	c4	c5
126	c1	c2	c3	c4	c5
127	c1	c2	c3	c4	c5
128	c1	c2	c3	c4	c5
129	c1	c2	c3	c4	c5
130	c1	c2	c3	c4	c5
131	c1	c2	c3	c4	c5
132	c1	c2	c3	c4	c5
133	c1	c2	c3	c4	c5
134	c1	c2	c3	c4	c5
135	c1	c2	c3	c4	c5
136	c1	c2	c3	c4	c5
137	c1	c2	c3	c4	c5
138	c1	c2	c3	c4	c5
139	c1	c2	c3	c4	c5
140	c1	c2	c3	c4	c5

Specimen only