**RSK2601**

(493955)

October/November 2012

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 17 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 **493955** 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 15.

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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 16 and 17). No rough work will be marked.

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SECTION A: MULTIPLE-CHOICE QUESTIONS

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

- 1 The variation between actual and expected results is known as ...
 - 1 subjective risk
 - 2 uncertainty
 - 3 probability
 - 4 risk

- 2 A measure of "risk per unit of expected return" is the...
 - 1 standard deviation
 - 2 coefficient of variation
 - 3 correlation coefficient
 - 4 variance

- 3 Dense fog that increases the chance of an automobile accident is an example of a .
 - 1 speculative risk
 - 2 peril
 - 3 physical hazard
 - 4 moral hazard

- 4 Indicate the **incorrect** statement.
 - 1 An example of people risk is fraud and theft.
 - 2 Poor data integrity is an example of systems risk
 - 3 Process risk is the risk of a business process being inadequate and causing unexpected losses.
 - 4 Operational risk is the exposure of an enterprise to losses resulting from external failures or shortcomings of people, processes and systems

- 5 Katelyn was just named Risk Manager of Ezweni Communications. She has decided to create a risk management program which considers all of the risks faced by Ezweni Communications - pure, speculative, operational, and strategic - in a single risk management program. Such an approach is called ... risk management
 - 1 financial
 - 2 enterprise
 - 3 operational
 - 4 compliance

[TURN OVER]

- 6 Beth was late for work. As she drove around a curve, she hit a patch of oil that had been spilled on the road. She slid across the road and hit a guard rail. Beth was not hurt, however, her car was severely damaged. The presence of oil on the road is best described as a (n):
- 1 peril
 - 2 objective risk
 - 3 moral hazard
 - 4 physical hazard
7. In the preceding question, the collision between Beth's car and the guard rail is an example of a ...
- 1 peril
 - 2 physical hazard
 - 3 legal hazard
 - 4 speculative risk
8. Second National Bank agreed to pay a high rate of return on long-term certificates of deposit (CD). Shortly after several depositors opted for the long-term CDs, inflation plunged and rates of return dropped. Second National must continue to pay high rates on the long-term CDs even though interest rates have declined significantly. This scenario illustrates ...
- 1 commodity price risk
 - 2 currency exchange risk
 - 3 business risk
 - 4 interest rate risk
- 9 Corporate Governance aims at ...
- 1 promoting the inefficient use of resources
 - 2 attracting higher cost of capital
 - 3 retarding overall performance
 - 4 ensuring adherence to legislation
10. With reference to the King III Code of governance principles, indicate the **correct** statement.
- 1 Internal audit should provide dependent assurance on the risk management process
 - 2 Risk management should be performed on an ongoing basis
 - 3 Compliance should not form part of the risk management process
 - 4 Risk management is separable from the company's strategic business processes.

[TURN OVER]

11. Traditional risk management overemphasized the management of ...

- 1 insurable risk
- 2 financial risk
- 3 uninsurable risk
- 4 operational risk

12. The most important drivers towards an enterprise risk management approach include the following

- a Increased value of tangible assets
- b Increased concentration of risk
- c Decline of insurance and development of ART
- d New business practices.

Choose the correct combination.

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

13. The ... risk management approach effectively integrates the efforts of operating managers with activities of risk managers.

- 1 traditional
- 2 business
- 3 enterprise
- 4 operational

14. When assessing risk in the business risk management process, it is important to consider the following:

- a The top risks currently faced by the enterprise
- b Risks attached to intangible assets crucial to value creation.
- c The root causes of the identified risk.
- d Set time horizons for the development of mental maps.

Choose the correct combination

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

[TURN OVER]

15. A properly designed risk framework for an enterprise serves the following purposes.
- a Prioritizing and collecting of information.
 - b Categorising risks.
 - c Formulation of a common language.
 - d Identification and prioritising risk exposures.

Choose the correct combination

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

16. Internal factors that may influence the corporate and risk management objectives of an enterprise include the:

- a technology used
- b infrastructure
- c economic environment
- d employees

Choose the correct combination.

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

- 17 Which of the following is not a category of risk management objectives?

- 1 Strategic
- 2 Reporting
- 3 Operational
- 4 Compliance

18. Which of the following characterises Enterprise Risk Management?

- 1 Emphasis on insurance and derivatives as risk transfer techniques.
- 2 Focus on individual risk and group of related risks.
- 3 Integrating operational and strategic activities
- 4 Functional approach to risk management.

19. The duties of the Chief Risk Officer (CRO) in an organisation include

- 1 defining the enterprise's risk priorities
- 2 validating risk management measures
- 3 aligning processes with reward systems
- 4 overseeing the business risk management function

[TURN OVER]

20. ...risk is avoidable through proper diversification.

- 1 Portfolio
- 2 Systematic
- 3 Unsystematic
- 4 Political

21. Suppose Borrower A can obtain R2 million for ten years at a floating rate of prime plus 0,80% but that he has to pay a fixed rate of 20% on a debenture for the same term. Borrower B can borrow floating funds at the prime rate and fixed rate funds at 16%. Borrower A and B agree to enter into a swap agreement in which Borrower A agrees to pay an additional 3% interest premium to Borrower B.

With regard to the aforementioned scenario, indicate the **correct** statement.

- 1 The effective cost of the floating funds of Borrower B is reduced by 2,2%
- 2 The total interest cost of Borrower A will be 16% on the total amount of R2 million.
- 3 Both borrowers gain 1% by entering to the swap agreement
- 4 Borrower B gains 3% by entering to the swap agreement.

22. A clothing manufacturer insures the factory for R100 000 000. A retail organisation with 10 branches countrywide insures each of the different branches for R10 000 000. A Maximum Possible Loss (MPL) of 10 percent and a Normal Possible Loss (NPL) of 1 percent of the insured sum applies in both cases.

In the light of this information, the...

- 1 NPL of the two businesses as per location will be similar
- 2 two businesses carry the same risk exposure
- 3 MPL of the two businesses will differ
- 4 maximum accumulated losses of the two businesses will be similar

23. Forward contracts ...

- 1 are highly liquid instruments
- 2 are over- the- counter instruments
- 3 carry lower credit risk
- 4 are traded on a formal exchange

24. Indicate the **correct** statement.

- 1 Interest rate caps specify both a rate cap and rate floor around a contracted loan rate.
- 2 An investor of funds seeking protection from falling interest rates will typically buy a Forward Rate Agreement (FRA).
- 3 Interest rate collars protect both the lender and borrower against interest rate fluctuations.
- 4 An investor of funds seeking protection from rising interest rates will typically sell a FRA.

[TURN OVER]

25. Indicate the **correct** statement about forward rate agreements (FRAs)

- 1 If the current rate is higher than the agreement rate, the buyer will receive the interest differential determined over the life of the loan
- 2 If the current rate is lower than the agreement rate, the buyer will receive the interest differential from the seller.
- 3 An investor of funds seeking protection from falling interest rates will buy an FRA
- 4 An investor of funds seeking protection from rising interest rates will sell an FRA.

26. In terms of business interruption the insured gross profit is defined as ..

- 1 revenue plus standing charges
- 2 gross income less variable cost
- 3 net profit plus standing charges
- 4 revenue plus variable expenses

27. A disclaimer notice delivered with the products marketed by a company

- 1 transfers the risk of usage of the products to the customer
- 2 is an example of a physical risk control measure
- 3 is an example of a procedural risk control measure
- 4 eliminates possible claims against the company resulting from the incorrect usage of the product

28. Indicate the **correct** statement.

- 1 Swaps may be used to increase the effective interest cost of borrowing.
- 2 Parties to interest rate swaps exchange the capital sums involved, adjusted for the differences in interest rates
- 3 The result of a swap is the swapping of interest obligations as well as the risk of inherent interest rate changes.
- 4 Swaps may be used to decrease the realised yield on an investment.

29. Indicate the **correct** statement.

- 1 A consumer of a commodity can hedge against a rise in the price of the commodity by buying a call option on the commodity.
- 2 A call option is an option to sell an asset at a specific price at a specific date.
- 3 European options can be exercised at any time
- 4 In the case of a call option, the premium must be deducted from the amount received for the asset in order to determine the profit position of the holder of the option.

[TURN OVER]

30. A person buys an option for R50,00 to buy an asset for R10,000. Four months after the option was written the market price of the asset increased to R11,000

With regard to the aforementioned scenario, the investor will

- 1 exercise the option and make a profit of R1 000,00
- 2 exercise the option and make a profit of R950,00
- 3 exercise the option and therefore do not have to pay the premium
- 4 benefit by not exercising the option

31. Frequent losses of low priced stationery items can ideally be funded through . .

- 1 insurance
- 2 reserve funds
- 3 cash flow
- 4 short term loans

32. Which one of the following **is not** a basic cost associated with loss producing events?

- 1 The cost of lost production.
- 2 The cost of repairing a facility.
- 3 The cost of installing a new alarm system.
- 4 The cost of insurance

33. By studying organisational charts of a business, the risk manager will be able to assess the .

- a extent to which control is centralised or decentralised
- b degree of autonomy of managers
- c key staff members
- d supplier risks

Choose the correct combination

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

34. Where there is little information available on a risk exposure the following measure can be used to evaluate the frequency of potential losses:

- 1 Accumulation
- 2 Trends
- 3 As-if analysis
- 4 "Pareto" rule

35. Notional limits ...

- 1 are aimed at containing the sensitivity of positions to changes in specific factors at portfolio, business unit or any other organisational level
- 2 aim to impose some sort of constraint on the overall magnitude of the portfolios that an organisation can accumulate either on- or off-balance sheet
- 3 determine the total possible value exposed to risk, given a certain confidence level
- 4 are useful in reflecting the "true" extent of risk taking in and across portfolios

36. Risk monitoring processes are generally applied to .

- a determine changes in the risk profile of an organisation
- b identify emerging risks
- c evaluate risk management performance
- d measure the adequacy of risk control measures

Choose the **correct** combination.

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

37. Reporting on the risk profile, business performance and risk implications usually forms part of the . . . risk report.

- 1 daily
- 2 monthly
- 3 quarterly
- 4 annual

38. The following performance standards are generally applied by organisations to measure risk management performance:

- a budgets
- b schedules
- c hurdle rates
- d "At risk" frameworks

Choose the **correct** combination.

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

39. Indicate the **correct** statement.

- 1 Aggregation methods provide a qualitative means to transfer, avoid and securitise risk.
- 2 Aggregation is a way to summarise an extremely simple set of rules.
- 3 Risks of which the mutual relationships are not known are pooled in order to manage them better.
- 4 Aggregation of multiple risks improves reporting and capital allocation.

40. Indicate the **correct** statement(s).

- a Hedging limits risk and possible resulting losses.
- b A short position involves the buying and holding of an asset with the expectation that the price of the asset will rise
- c A long buyer of an asset expects the price of the asset to rise.
- d A short seller in the market expects the price of the asset to fall.

Choose the correct combination:

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

[40 X 1 = 40 marks]

[TURN OVER]

SECTION B: PARAGRAPH QUESTIONS AND CALCULATIONS**ANSWER ALL THE QUESTIONS IN THIS SECTION****Question 1 (10 marks)**

Assume the following hypothetical distribution of stock losses due to theft for product A of a small chain of retail stores.

AMOUNT OF LOSS	PROBABILITY OF OUTCOME
R20 000	0.60
R25 000	0.30
R60 000	0.10

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

1.1 Expected outcome

1.2 Variance

1.3 Standard deviation

[TURN OVER]

1.4 Coefficient of variation

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- 1 5 Assume that the coefficient of variation of stock losses due to theft of product B for the same retailer is 51%. Rate the risk of product A compared to product B in terms of losses due to theft.

Question 2 (10 marks)

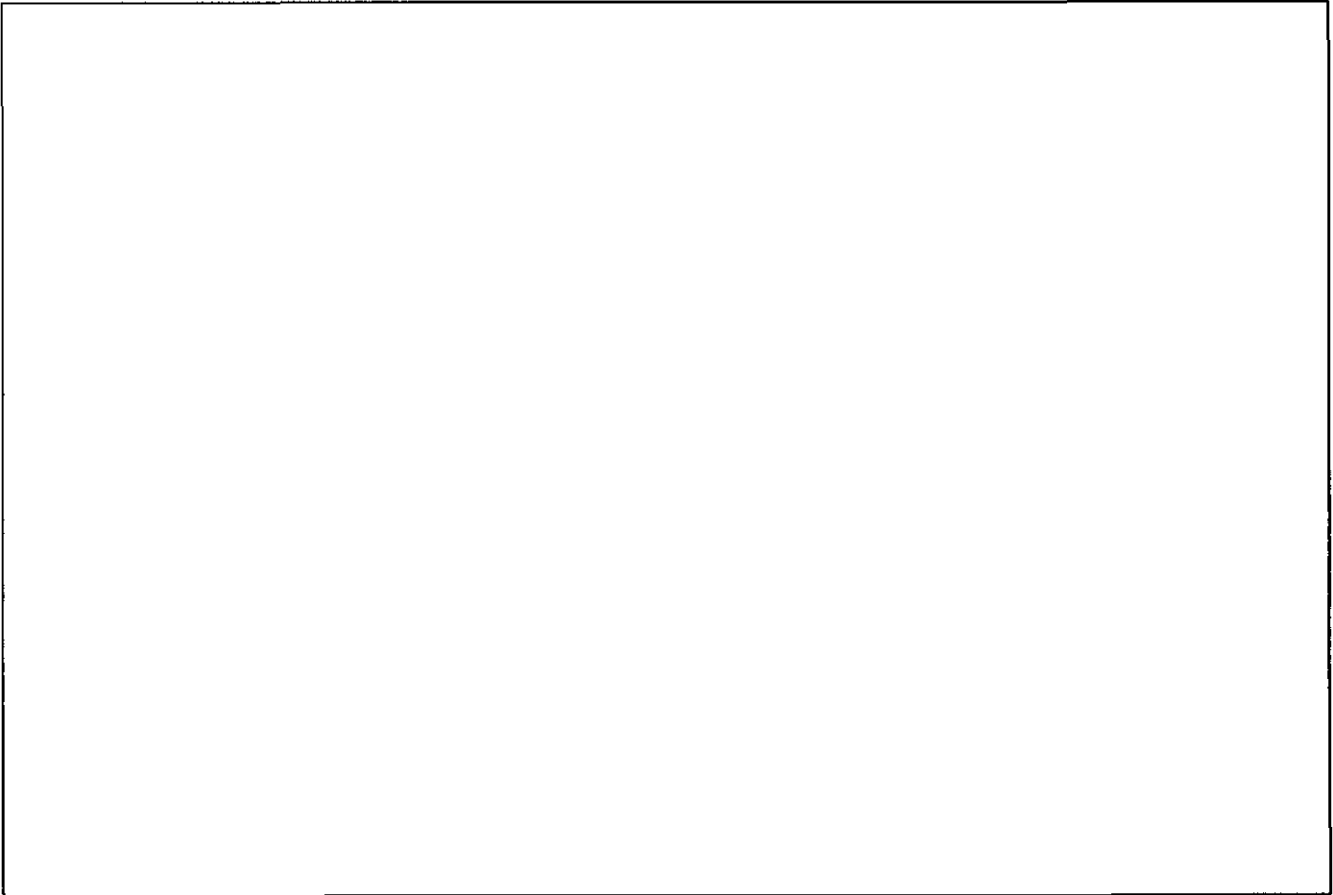
- 2 1 Discuss the two basic properties of probabilities

4

[TURN OVER]

3.1 Calculate the cost (discount) of issuing the BA.

4



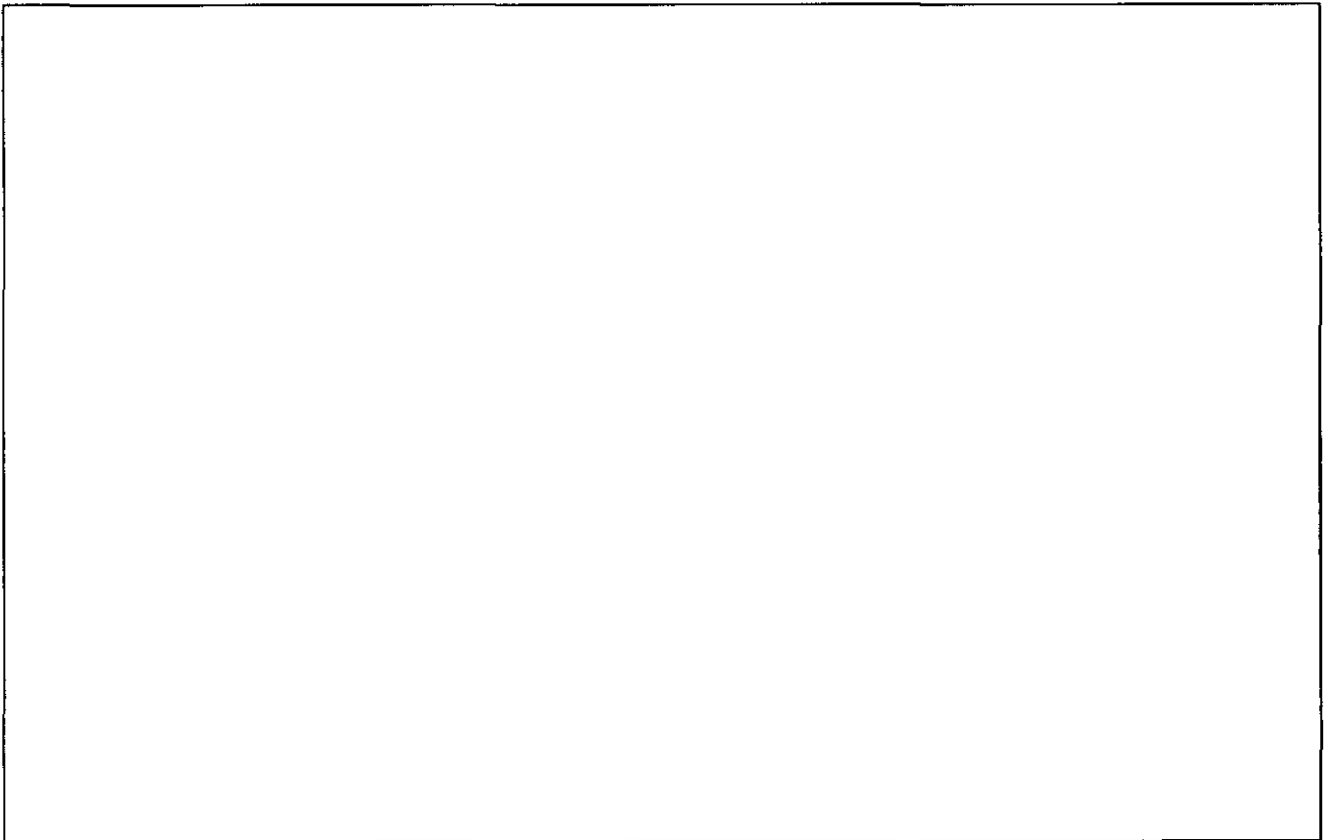
3.2 Determine how much will the company have to receive/pay in order to lock in a discount rate of 15.5%?

3

**[TURN OVER]**

3.3 Calculate the cost of the roll-over to the company (holder of the FRA).

3



(10 marks)

[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

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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
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PART 2 (ANSWERS/ANTWOORDE) DEEL 2

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Specimen only