



MERU UNIVERSITY OF SCIENCE AND TECHNOLOGY

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UNIVERSITY EXAMINATIONS 2023/2024

FIRST YEAR, SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR
OF SCIENCE IN ACTUARIAL SCIENCE

SMS 3120: PRINCIPLES OF GENERAL INSURANCE

DATE: APRIL 2024

TIME: 2 HOURS

INSTRUCTIONS: Answer Question ONE and any other TWO questions.

QUESTION ONE (30 MARKS)

- a) Define the following terms as used in general insurance;
- i. Insurable Interest [2 Marks]
 - ii. Underwriting [2 Marks]
 - iii. Reinsurance [2 Marks]
- b) State four purposes of general insurance [4 Marks]
- c) Explain how the principles of insurance apply to liability insurance [6 Marks]
- d) If the probability of a fire in a building is 0.2% annually, calculate the expected number of fires in a year in a town with 1,000 similar buildings. [5Marks]
- e) State the role of insurance in a comprehensive risk management strategy. [5 Marks]
- f) State the ethical considerations in insurance practices [4 Marks]



MUST is ISO 9001:2015 and



ISO/IEC 27001:2013 CERTIFIED

QUESTION TWO (20 MARKS)

- a) Identify and discuss the technological advancements impacting the insurance industry. [8 Marks]
- b) Suppose a regulation states that an insurance company must pay a penalty of 2% of the improperly handled claim amount. If an audit reveals \$250,000 of such claims, what is the total penalty? [4 Marks]
- c) Discuss the importance of financial management in insurance companies and its impact on policyholders. [8 Marks]

QUESTION THREE (20 MARKS)

- a) Explain how technological advancement affected the general insurance industry? Provide specific examples. [8 Marks]
- b) An insurance company invests \$200,000 in new technology, expecting to reduce claim processing costs by 10% annually. If their current claim processing costs are \$500,000 per year, how many years will it take to recover the investment? [6 Marks]
- c) Outline six factors considered in general insurance underwriting. [6 Marks]

QUESTION FOUR (20 MARKS)

- a) An insurance company invests \$200,000 in new technology, expecting to reduce claim processing costs by 10% annually. If their current claim processing costs are \$500,000 per year, how many years will it take to recover the investment? [6 Marks]
- b) An insurance company decides to take out reinsurance, which covers 75% of claims over \$1 million. If a claim of \$2 million is made, how much will the reinsurer pay, and how much will the primary insurer pay? [6 Marks]
- c) Explain the role of reinsurance in insurance company operations and discuss its benefits. [8 Marks]



QUESTION FIVE (20 MARKS)

- a) Outline the essential elements of an insurance contract and explain the significance of each element. [6 Marks]
- b) A car insured for \$20,000 (motor vehicle insurance) is damaged in an accident. The assessed damage is 25% of the car's insured value. Calculate the claim amount, assuming no deductible. [8 Marks]
- c) An individual purchases a property insurance policy with a coverage limit of \$500,000. The insurance company has set the premium rate at 0.6% of the coverage amount. Calculate the annual premium. [6 Marks]

