Inspiring Innovation and Leadership

KARATINA UNIVERSITY

UNIVERSITY EXAMINATIONS
2024/2025 ACADEMIC YEAR

THIRD YEAR **FIRST** SEMESTER REGULAR

EXAMINATION

FOR THE DEGREE OF

BACHELOR OF SCIENCE IN ACTUARIAL

SCIENCE

COURSE CODE: ACS 313

COURSE TITLE: LIFE INSURANCE

DATE: 18th DEC, 2024   TIME: 12:00 PM - 2:00 PM

Instructions: See Inside

Answer question **ONE** in section A and any other **TWO** from section B.

SECTION A

Question **ONE** is compulsory

QUESTION ONE (30 Marks)

(a) Define the following terms:

   (i) Life assurance   **[1 mark]**

   (ii) Re-insurance   **[1 mark]**

   (iii) Reserves   **[1 mark]**

   (iv) Premium   **[1 mark]**

   (v) Surrender value   **[1 mark]**

   (vi) Underwriting   **[1 mark]**

(b) Explain 3 major methods used in the distribution of profits to policyholders.

[6 marks]

(c) Discuss 4 types of life assurance contracts in terms of consumers' needs, financial risks, and other risks.   **[8 marks]**

(d) Explain the difference between Index-linked and Unit-linked contracts. **[2 marks]**

(e) Explain clearly the role of the Insurance Regulatory Authority (IRA) in regulating life assurance contracts.   **[4 marks]**

(f)   (i) Define supervisory reserves.   **[2 marks]**

    (ii) Explain 2 methods used in reserve calculation.   **[2 marks]**

SECTION B

Answer **any Two** questions from this section

QUESTION TWO (20 Marks)

(a) Explain 5 principles used in setting up assumptions for pricing and valuing.

[**10 marks**]

(b) Explain 5 principles for setting up supervisory reserves. [**10 marks**]

QUESTION THREE (20 Marks)

Explain 10 common risks faced by the insurer in life assurance policies. [**20 marks**]

QUESTION FOUR (20 Marks)

(a) Discuss 5 factors used in designing life assurance contracts. [**10 marks**]

(b) (i) Define surplus distribution. [**2 marks**]

   (ii) Explain 4 sources of the surplus in life assurance contracts. [**8 marks**]

QUESTION FIVE (20 Marks)

(a) (i) Define solvency [**2 marks**]

   (ii) Explain 3 key principles used in the assessment of ongoing solvency.

[**6 marks**]

(b) Give a formula for the Gross Premium Valuation reserve for a regular premium endowment assurance. [**1 mark**]

(c) Name 5 key features of the Net Premium Valuation method. [**5 marks**]

(d) Explain 3 reasons why insurance companies set up reserves. [**6 marks**]