

INSTITUTE OF ACTUARIES OF INDIA

EXAMINATIONS

1st December 2022

**Subject CP1 – Actuarial Practice
(Paper A)**

Time allowed: 3 Hours 15 Minutes (14.45 - 18.00 Hours)

Total Marks: 100

INSTRUCTIONS TO THE CANDIDATES

- 1. Please read the instructions inside the cover page of answer booklet and instructions to examinees sent along with hall ticket carefully and follow without exception.*
- 2. Attempt all questions beginning your answer to each question on a separate sheet.*
- 3. Mark allocations are shown in brackets.*
- 4. Please check if you have received complete Question Paper and no page is missing. If so kindly get new set of Question Paper from the Invigilator.*

AT THE END OF THE EXAMINATION

Please return your answer book and this question paper to the supervisor separately. You are not allowed to carry the question paper in any form with you.

- Q. 1)**
- i)** What is Underwriting (UW)? (2)
 - ii)** How can underwriting be used as a risk management tool? (3)
- [5]
- Q. 2)** In the last business review, there was a discussion on how liability provisions and assumptions for those provisions should be set. You were asked by the CEO to write a note for the management and Board on the same.
- Briefly outline the type of assumptions that would be used for the following purposes as part of the note:
- a) Published account
 - b) Supervisory Solvency
 - c) Discretionary benefits
 - d) Discontinuance benefits
 - e) Disclosure to beneficiaries
 - f) Liability transfer
- [7]
- Q. 3)** You are the Chief Financial Officer (CFO) of your Health Insurance company. Expense ratio of the company has been growing at the rate of 7.95% over the past few years while for the peers it has been decreasing. Your company is planning to go for the IPO (Initial Public Offering) and it is important that expense ratios come down before IPO work starts. There is a suggestion that company should acquire small hospitals for treatment and testing of its policyholders with the aim to reduce its costs.
- i)** Outline how this approach will help reduce costs or improve the financial position of the company? (3)
 - ii)** Briefly discuss the issues the company will need to consider before proceeding with the acquisition of such hospitals/centres. (5)
- [8]
- Q. 4)** A Non-Life insurance company offers a foreign travel insurance policy that provides coverage against the following risks:
- a) Emergency medical expenses abroad
 - b) Loss of luggage whilst travelling
 - c) Trip cancellation due to medical reasons
 - d) Theft of your money or passport loss
- Describe the risk mitigation techniques that the insurance company can use to control the above risks. [10]
- Q. 5)** In a country called Utopia, Insurance regulator has allowed insurance companies to invest in Crypto. Cryptos are currently being traded by banks and a few private companies. Most of the trades are Over The Counter (OTC) contracts.

Your product head wants to create a product solely backed by Crypto as the assets. You are head of Actuarial team and you have been asked for your inputs on the proposal to use Cryptos.

- i) What is the role of a regulator? (3)
 - ii) Discuss the pros and cons of such a proposal that you will state in your note. (10)
- [13]**

Q. 6) The on-and-off lockdowns due to Covid-19 in the World, has upset the delicate balance between supply and demand of goods & services and is driving prices to record high. Central banks from all around the world are raising their key interest rates with the aim to combat increase in prices.

The central bank of a developed country has increased short term interest rates in a bid to tame soaring inflation.

- i) Explain the role of the Central Bank and how such a course of action taken by the Central Bank may curb the inflation. (7)

Economic advisor to the Government has commented that “Aggressive monetary policy is a tightrope walk. Making money more expensive can adversely impact assets & liabilities, growth, salaries and employment.”

- ii) Comment on the above assertion. (7)
 - iii) Given the current economic uncertainties with constantly increasing interest rates and a possibility of recession, how would long term institutional investors seek to maximise the returns? (4)
- [18]**

Q. 7) The Bank has been providing personal loans to its customers. Personal loan can be taken using their application which is based on a dynamic credit limit of the customer.

The Bank is also planning to open a Life Insurance Company of its own that will sell only Term insurance products mainly to cover its borrowers (personal loan), employees and their Key Management Personnel.

- i) Briefly discuss the risks of writing term assurance business to the insurer. (6)
- ii) Outline how the term assurance products would help the Bank to manage its risks pertaining to the loans given to borrowers? (3)
- iii) How will you design a product for the Bank with the above objectives? (6)

The Chief Financial Officer of the Bank is concerned that the Bank still carries some non-insurance risks despite offering term assurance products through its proposed Life Insurance Company.

- iv) Comment on this assertion. (4)
- [19]**

- Q. 8)** ABC is a large life insurance company which is planning to buy a small insurance company as part of its inorganic growth plan. Use your knowledge of Actuarial Control Cycle to discuss the areas that will be impacted or will need attention from the management before the management takes a decision.

[20]
