M.Sc. (FULL TIME)

Term-End Examination

June, 2012

00972

MIA-012 (F2F) : ACTUARIAL RISK MANAGEMENT-I

Time : 3 hours   *Maximum Marks : 100*

SECTION-A

There are 7 questions in *section-A* each carries *eight* marks. Attempt *any five*.

1. (a)   List the three types of advise that an actuary   3
           may provide.

    (b)   List ten basic elements that are common to   5
           all actuarial work.

2.   In a particular developed country. It has been   8
      proposed that state pension provision should be
      eliminated, instead, pension would have to be
      provided for all by individuals and employees
      through compulsory saving in the private sector.
      Discuss this proposal.

3. (a) Describe the customer needs met by the   6
following contracts.
   (i) Long term sickness insurance
   (ii) Critical illness
   (iii) Long term care
   (b) What is Moral hazard ?   2

4. List the perils associated with each of the following   8
forms of insurance.
   (a) Employer's liability
   (b) Public liability
   (c) Product liability
   (d) Professional indemnity
   (e) Marine hull cover
   (f) Pecuniary loss
   (g) fidelity guarantee.

5. List the advantage and disadvantage of investing   8
in equities via a collective investment scheme for
   (a) an individual investor
   (b) a large institutional investor

6. (a) List the factors that influence the level and   5
shape of the yield curve.
   (b) Suggest reasons why an investor might   3
invest heavily in Treasury bills ?

7. Explain how you could use the discounted   8
dividend model to value the equity shares of an
established company that is not expected to make
a profit for several years.

SECTION-B

There are *six* questions in *section-B* each carries 15 marks. Attempt *any four*.

8. (a) State three policy objectives that a government may try to achieve by altering the level of short term interest rates and explain how changing interest rates can achive these objectives.   9

   (b) Describe with examples, the risk premium in the required return on an asset class.   6

9. (a) Outline the main benefits and costs with the regulation of financial services.   10

   (b) You have recently completed an actuarial task.   5

   Explain the issues to be considered when you communicate the results to your client.

10. (a) Explain how the expectation theory explains the shape of the yield curve.   3

   (b) Describe three other theories that explain deviations from the expected shape of the yield curve.   7

   (c) Explain why a corporate bond might have a significant higher yield than a goverment bond of the same duration.   5

11. A life insurance company is about to enter the 15 annuity market for the first time. It intends to sell without profit immediate annuities with higher annuities for those lives in ill health. Describe how the actuarial control cycle can be used in the pricing and ongoing financial management of the product. It is not necessary to the product might be administered.

12. A medium sized final salary pension scheme incorporates both retirement and death-in-service benefits. The trustees have asked the actuary to draft a short report discussing the possible ways of using insurance contracts to reduce the mortality risks and uncertainties.
    Set out the points that would be made in the report, which should include :
    (a) the features of the different insurance 8 contracts that may be used.
    (b) the advantage and disadvantage of using 7 insurance contracts.

13. A french based fashion clothing retailer; which is 15 considering setting up a new internet subsidiary to sell it's clothing range into the US market. Currently it has no distribution outside France. Identify the major risks involved in launching the subsidiary together with ways that these risks might be mitigated.