



THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

A. M. E. C. E. A

MAIN EXAMINATION

P.O. Box 62157
00200 Nairobi - KENYA
Telephone: 891601-6
Fax: 254-20-891084
E-mail: academics@cuea.edu

AUGUST – DECEMBER 2018 TRIMESTER

FACULTY OF SCIENCE

DEPARTMENT OF MATHEMATICS AND ACTUARIAL SCIENCE

REGULAR PROGRAMME

ACS 405: PENSION FUNDS AND SOCIAL SECURITY

Date: DECEMBER 2018

Duration: 2 Hours

INSTRUCTIONS: Answer Question ONE and any other TWO Questions

- Q1. a) i) Outline the reasons why a government may introduce some forms of compulsory private pension provisions. **(4marks)**
- ii) List 3 disadvantages of introducing compulsory private savings for pensions. **(3marks)**
- b) Describe the state may use the taxation system to encourage provision for retirement by or on behalf of individuals. **[4marks]**
- c) i) Define the meaning of the term Balance of cost scheme **[2marks]**
- ii) Describe 2 advantages and disadvantages of using means-tested benefits in pensions setups. **(5marks)**
- d) Outline arguments for and against advance funding for social security systems. **[4marks]**
- e) A company is proposing to cease accrual to its defined benefit pension scheme. As a consequence, all the active members will leave the pensionable service and become deferred pensioners. Discuss the options available to the trustees to meet the provisions of outstanding benefit payments, stating the risk of each option from the trustees' perspective. **(8marks)**

- Q2. a) The government of a developing country is considering setting standards for the disclosure of information regarding pension's liabilities in company accounts.
- i) State why such standards may be desirable. **[3marks]**
- ii) List the main items which might be disclosed in respect of a final salary pension scheme. **[5marks]**
- b) A developed country has a range of private pension provision covering about 50 percent of the workforce. The government of the country is planning to introduce state pension provision which is aimed mainly at those workers who currently have no private pension provision.
- i) As the government actuary, you have been asked to advise of the general features of state pension provision and to compare the following systems:
- Flat rate contributions and benefits; or
 - Earnings related to contributions and benefits
- Set the points you would make in your reply **(12marks)**
- Q3. a) You are the actuary advising a small benefit pension scheme. Set out three advantages and three disadvantages of buying annuities. **[6marks]**
- b) Give 5 factors that affect the forms and levels of benefits provided a pension scheme **(6marks)**
- c) A large company has an income replacement scheme for its employees. If an employee is unable to work due to ill health after a six month's waiting period, the scheme provides an income of 75% of the member's salary at the date he fell ill until he reaches age 65 or recovers sufficiently to return to work. The benefit increases in payment by 4% p.a Compound. The benefit is insured on a group basis. The finance director has expressed concern about a recent increase in insurance premium.
- i) Suggest reasons why the premium is likely to have increased. **(4marks)**
- ii) Suggest possible ways to reduce the premium **(4marks)**
- Q4. a) The trustees of a long established medium sized final salary pension plan are about to review its investment policy. Outline the key areas that should be considered. **(5marks)**
- b) i) Define net replacement ratio **(2marks)**

- ii) Discuss the limitations of using the net replacement ratio as a measure for individuals need for post-retirement pension **(3marks)**
 - c) i) Describe the main factors that contribute to the expenses of running a defined benefit scheme **(5marks)**
 - ii) Describe the options that an employer could consider to reduce the expenses **(5marks)**
- Q5. a) List the roles the state is likely to play in relation to retirement benefits provision. **[2marks]**
- b) A defined benefit scheme provides a range of benefits available on retirement, death and living service.
- i) List six benefit options which the trustees might wish to consider granting to scheme members. **[6marks]**
 - ii) Describe the principles which determine the terms of such options. **[5marks]**
- c) Currently the only benefits provided by a defined benefit pension scheme are benefits to scheme members on retirement. The employer is considering extending the scope of the scheme to provide benefits to the dependants of the scheme members on death of a scheme member. Discuss the issues which the employer should consider before extending the scope of the scheme. **(7marks)**

END