INSTITUTE AND FACULTY OF ACTUARIES

EXAMINERS' REPORT

April 2018

Subject ST4 – Pensions and other Benefits Specialist Technical

Introduction

The Examiners' Report is written by the Principal Examiner with the aim of helping candidates, both those who are sitting the examination for the first time and using past papers as a revision aid and also those who have previously failed the subject.

The Examiners are charged by Council with examining the published syllabus. The Examiners have access to the Core Reading, which is designed to interpret the syllabus, and will generally base questions around it but are not required to examine the content of Core Reading specifically or exclusively.

For numerical questions the Examiners' preferred approach to the solution is reproduced in this report; other valid approaches are given appropriate credit. For essay-style questions, particularly the open-ended questions in the later subjects, the report may contain more points than the Examiners will expect from a solution that scores full marks.

The report is written based on the legislative and regulatory context pertaining to the date that the examination was set. Candidates should take into account the possibility that circumstances may have changed if using these reports for revision.

Luke Hatter
Chair of the Board of Examiners
July 2018

A. General comments on the *aims of this subject and how it is marked*

1. The aim of the Pensions and Other Benefits Specialist Technical subject is to instil in successful candidates the ability to apply, in simple situations, the mathematical and economic techniques and the principles of actuarial planning and control needed for the operation on sound financial lines of providers of pensions or other employee benefits.

2. This subject examines the ability of candidates to apply core actuarial techniques and concepts, together with specific knowledge of pensions and other benefit arrangements to simple, but practical situations.

3. The Examiners therefore look for candidates to apply their knowledge of the core reading to the specific situation that the Examiners asked, having read the question carefully. Too many candidates write around the subject matter of the question in more general fashion, or focus on one aspect of the issue at great length, in either case gaining few of the marks available.

4. Good candidates demonstrate that they have used the planning time well - an attempt to get a logical flow is a big advantage in making points clearly and without repetition. This also enables candidates to use the latter parts of questions to generate ideas for answers to the early parts (or use their solutions to earlier parts of questions to create a structure for latter parts). Time management is important so that candidates give answers to all questions that are roughly proportionate to the number of marks available.

5. Candidates who give well-reasoned points, not in the marking schedule, are awarded marks for doing so.

B. General comments on *student performance in this diet of the examination*

The overall standard of scripts was similar to the previous session, with candidates over recent years maintaining a very consistent level of performance. This was a well-balanced exam paper and the better prepared candidates passed.

It is very important that candidates consider all aspects of the question, and read the preamble fully. There is never superfluous information in the question, and by using all of the information available, candidates can ensure they give a full answer. Giving just a little more to clearly show depth can turn a close fail into a pass. The questions are set so that it should take approximately twice as long to answer a 10 mark question as a 5 mark one. Answers should therefore be similarly proportionate.

In addition, candidates should carefully consider the command verbs used to guide the depth given in their answers (a list of what is expected for each verb is available on the IFoA website).

C. Pass Mark

The Pass Mark for this exam was 60.

Solutions

Q1 (i)

- Type of Defined Benefit Scheme [½]
- e.g. CARE etc. [½]
- Level & generosity of benefits [½]
- This is primarily accomplished through the accrual rate which is the amount of benefits built up for each year of service [½]
- Eligibility [½]
- e.g. an individual may be required to reach a minimum age before becoming eligible to accrue or receive certain benefits etc. [½]
- This may help to reduce the costs of provision and in some cases may not significantly affect the benefit needs of an individual. [½]
- Vesting periods may mean that short serving employees aren't eligible for benefits which will reduce costs etc [½]
- Dependent's provision [½]
- Risk Benefits [½]
- E.g. benefits on death in service or ill-health. [½]
- Death benefits are commonly in the form of a lump sum to cover immediate liabilities such as funeral costs and perhaps loan repayments[½]
- Together with a pension to provide continued financial protection for dependents. [½]
- Integration with other benefits [½]
- For all types of non-State benefit, the provider may wish to target a total level of benefit by allowing for State benefits in setting their own level of benefit provision. [½]
- As individuals are likely to join and leave at different ages, it is unlikely that this will be possible in an accurate manner. [½]

- Pension Increases / Revaluation in deferment [½]

- Consideration should be given to whether a benefit will continue to meet the needs of the beneficiary in future years. [½]

- It may therefore be appropriate to increase the amount of the benefit from time to time on a regular basis, e.g. annually. [½]
- This could be at a fixed rate, in line with some form of inflation index, on a discretionary basis, or a combination of these. [½]

- Benefits on Leaving Employment [½]

- The State and employers may choose to differentiate between those who leave employment of their own choice and those who are forced to leave due to company restructuring or a general economic downturn. [½]

- In relation to the former group, it may be felt that there is no obligation to provide any benefit. [½]

- Alternatively, it may be viewed that where any benefit promise has been made there is a need to maintain equity between any employees who leave employment and those who remain. [½]

- Target retirement age (maybe for workforce planning) [½]

- Definition of pensionable salary [½]

- Link to salary and service [½]

- Contributions (whether to get engagement/save costs by asking employees to contribute and how much) [½]

- Options and guarantees [½]

- Target pension at retirement [½]

- Regulation (need to ensure benefit structure is compliant) [½]

- Integration with other employer benefits i.e. fitting into a flex scheme [½]

- Tax efficiency – design it to be as tax efficient as possible [½]

[Max 7]

(ii)

- Set up DB scheme as a CARE scheme or cash balance etc. to mitigate salary risk [½]

- Address operational risks e.g. outsource admin [½]

- Have some benefits discretionary [½]
- Require consent for options [½]
- Risk reduction exercises e.g. PIE etc. [½]
- The scheme could be changed to be a defined contribution scheme. [½]
- In this case the experience risks, particularly of investment and (pre-retirement) mortality lie with the individual. [½]
- However this may be very unpopular with employees who value the security of a DB scheme and are concerned about the risks they are taking on in a DC scheme [½]
- Hybrid Scheme – Alternatively a scheme design that contains elements of risk sharing with employees may be feasible. [½]
- For example this could mean a scheme that is DB to a certain salary level and DC after that [½]
- Or one which has a set cap on employer costs with employees paying the balance. [½]
- Contributions – Increasing the level of employee contributions will reduce the cost for the employer [½]
- In particular some sort of "cost sharing" mechanism will reduce the risk of large future contributions [½]
- For example the employee contributions could be set to automatically increase when the employer contributions increase [½]
- Financing – The company could finance benefits more prudently [½]
- This would reduce the risk of unexpected future requirements for funding [½]
- It may also reduce the level of costs if the investments generate real returns [½]
- Investment Strategy - Investing in lower risk assets will reduce the risk of investment under performance but at the cost of lower expected returns. [½]
- Some risks may be mitigated through the investment strategy; for example purchasing Longevity Bonds. [½]
- NRA could be adjusted in line with trends in the general population. [½]

- The company can also look to match their assets to the liabilities, e.g. by investing in assets that are expected to increase at the same rate as pension payments. [½]

- Insurance – The company could insure some benefits such as death in service and ill-health to remove the volatility of costs associated with this. [½]

- The company could also purchase annuities from insurance companies to cover the pension payments although this is likely to be expensive [½]

[Max 8]

(iii)

- Commutation [½]
- Early Retirement [½]
- Exchange of dependents pension / Allocation [½]
- Late retirement [½]
- CETVs [½]
- Changing level / form of benefits [½]
- E.g. Options on pension increases (e.g. akin to PIE) [½]

[Max 2]

(iv)

- Uncertainty of cost [½]
- Matching difficulties e.g. cash flows, liquidity requirements etc. [½]
- Workforce planning difficulties [½]
- Risk of selection against the scheme e.g. if members with low life expectancy commute high levels of benefits [½]
- Selection risk, may only be purchased by those who expect to gain some value from it [½]
- Liquidity risk as money may be required immediately [½]
- Longevity risk e.g. dependents live longer than expected [½]
- Inflation risk e.g. PIE to inflation linked pension [½]

- Risk that options factors, e.g. early retirement factors, are not cost neutral so overall benefits paid out are higher [½]

- May encourage workers to leave early which could have workforce planning implications [½]

- May be additional administrative requirements, particularly if the additional benefits are of a different form to the scheme benefits. [½]

- Reputational risk if option terms are deemed to be unfair [½]

- Overall strain if terms are deliberately set to be generous [½]

[Max 4]
[Total 21]

Part i was answered well with many candidates picking up the main design elements.

Parts ii and iv were less well answered as some candidates included things that were not relevant to the risks in question. This highlights the point that answers should relate directly to the question being asked.

Part iii was very well answered with most scoring the full 2 marks.

Q2 (i)

- fluctuations in experience [½]

- changes of the experience with time [½]

- Specifics known past events [½]

- changes in the way in which the data was recorded [½]

- potential errors in the data [½]

- Relevance e.g. changes in the balance of any homogeneous groups underlying the data heterogeneity with the group to which the assumptions are to relate [½]

- Particularly as closed to new entrants [½]

- Volume of data [½]

- size of scheme [½]

- heterogeneity of group [½]
- particularly as a multi-employer scheme [½]
- Cost of analysis v benefits to the valuation (materiality) [½]

[Max 3]

(ii) **General**

- As it is a funding valuation we might expect there to be some prudence in the assumptions [1]
- Depends on the objectives of the interested parties [½]
- For example – the choice of valuation method [½]
- Credibility of assumptions (e.g. size of scheme, quality of data) [½]
- The same assumptions for every individual employer or use scheme wide assumptions [½]
- How much external experience may be able to be used [½]
- Actuarial standards / any legal requirements [½]
- The assumptions need to be consistent with each other [½]
- And considered together (eg discount vs inflation, inflation vs salaries, with the 'gaps' being more important than absolute values) [½]
- Reference to Trust Deed and rules [½]

Discount rate

- Will depend on the valuation method [½]
- Investment strategy, actual and notional could be relevant [½]
- As well as anticipated changes to the investment strategy over time [½]
- Fund manager expectations [½]
- Market expectations of future returns [½]
- How to set the discount rate? [½]
- and allowance / link to the strength of the employer covenant [½]

Pension Increases

- What guaranteed increases are provided? [½]
- If inflation linked , what measure of inflation are the pension increases linked to, is there any modification to the index (e.g. a cap or a floor) [½]
- What has inflation been historically, are there any trends that may need to be taken into account. [½]
- Duration of liabilities [½]
- Proportion of liabilities across Active, Deferred, Pensioners [½]
- Practice of granting discretionary increases [½]

Salary Increases

- The level of recent salary increases from employers [½]
- Future expectations, maybe ask employers [½]
- GDP expectations [½]
- Trends in specific sectors [½]
- Promotional salary scale considerations [½]

Mortality

- Recent experience both in the scheme, and more widely [½]
- Type of industry, is standard mortality appropriate or should there be something industry specific [½]
- Future improvements expected [½]
- Derive own mortality table or adjust a standard table [½]
- Post code / geographical allowance [½]

Withdrawals

- Level of recent withdrawals from the scheme [½]
- Any future changes that might impact this such as a redundancy exercise [½]

- Split of voluntary and involuntary withdrawals [½]

- Importance of withdrawals for liability calculations (e.g. Benefit level on withdrawal) [½]

- Likelihood of having enough data to do a scheme-specific analysis (benefit v cost of analysis) [½]

[Max 9]
[Total 12]

> *Both parts of question 2 were answered well by most candidates, with the answers generally being sufficiently detailed to get a lot of the available points.*

Q3 (i)

- Retirement benefits [½]
- Death Benefits [½]
- Protection benefits [½]
- Permanent disability [½]
- Temporary absence [½]
- Permanent absence [½]
- Subsidised healthcare [½]
- Family support [½]
- Savings [½]
- Subsidised goods [½]
- Subsidised services [½]

[Max 3]

(ii)

- Disclosure requirements [½]
- e.g. valuation reports [½]
- Appoint professional advisers [½]

- Maximum levels of fees on investment funds [½]
- Investment restrictions [½]
- e.g. self-investment [½]
- Employer covenant checks [½]
- Professional guidance/codes of conduct [½]
- Pension providers need authorization [½]
- Set up a protection fund to ensure benefits are protected. [½]
- This could be funded centrally by the Government [½]
- or by a levy on other pension funds [½]
- Set up a Regulator who is responsible for the security of member benefits [½]
- They could have various powers including:

    The ability to force employers to contribute to the pension fund [½]

    Ranking employers on the quality of their pension provision [½]

    "Name and shame" poor quality schemes / sponsoring employers [½]

- With fines for any offenders [½]
- Encourage whistleblowing [½]
- Regular actuarial valuations of pension schemes [½]
- Funding targets for DB pension schemes, 100% funding for DC schemes [½]
- and possibly tax incentives to help ensure that these are met [½]
- Ensure benefits are financed in advance rather than PAYG [½]
- Separation of fund and employers so that a separate group (trustees) are responsible for providing benefits to members. [½]
- Ensure that Trustees only duty is to members [½]
- and that they have the power to request money from employers, e.g. if there is a deficit [½]

- Make it difficult for any DB surplus to be returned to employers [½]
- E.g. penal tax rates [½]
- Introduce restrictions on what firms with DB deficits can do [½]
- e.g. they can't pay dividends before any deficits are paid off [½]

[Max 8]

(iii)

- Additional DB funding guidance such as prudence in valuations [½]
- E.g. either an explicit margin for prudence or assumptions set to be prudent rather than best-estimates. [½]
- Additional guidance on 'integrated risk management' [½]
- With interdependence between funding, investment and covenant [½]
- Introduce peer review [½]
- And training, education, CPD requirements etc [½]
- Whistle-blowing if actuaries are concerned about how a pension fund is being run [½]
- A requirement to consider the interests of members in any advice provided [½]
- An update to disciplinary procedures to discipline any members of the profession implicated in any pension scandals [½]
- Principles for managing conflicts of interest [½]
- A requirement for an actuary who has any material concerns about the way the trustees are fulfilling their duties and responsibilities to share his concerns with the trustees and take such consequential action as is appropriate in the circumstances. [½]
- For example concerns that a course of action is not appropriate; and/or [½]
- the trustees have failed or are failing to carry out an appropriate action; and/or [½]
- The trustees might be unaware of a duty or responsibility or guidance relating to a duty or responsibility. [½]

[Max 4]

(iv) **Advantages**

- Simple and cheap to administer [½]
- May provide an economic stimulus [½]
- Likely to be popular [½]
- May eradicate poverty… [½]
- depending on the level of universal income [½]
- If means tested may end disincentives around citizens on benefits finding work [½]

Disadvantages

- Will not target need effectively [½]
- Expensive to provide [½]
- How / who meets the cost e.g. extra tax? [½]
- May be difficult to set the appropriate level of benefits [½]
- May be considered regressive by some [½]
- Cost of transition / administration / communication to members [½]
- May encourage people to stop working [½]

[Max 5]
[Total 20]

Part i and ii were generally well answered by candidates.

In part iii, many candidates seemed to struggle to provide enough points to get the marks available.

For part iv, the better candidates structured their answers by specifically looking at the pros and cons of the proposed policy.

Q4 (i)

- Basic information e.g. name, date of birth etc. [½]
- Projected fund at retirement [½]
- Range of projected funds on different bases [½]

- E.g. optimistic, median , pessimistic etc / sensitivity illustrations [½]
- With appropriate risk warnings [½]
- Expected return under a number of different scenarios [½]
- The assumptions adopted in the projections shown [½]
- E.g. future inflation, salary growth, expenses etc. [½]
- How the return may relate to annual income in the future and the effect of inflation on this [½]
- Any options that the member has [½]
- Contribution options and impact on projections [½]
- E.g. exchanging pension for lump sum or securing additional benefits [½]

[Max 4]

(ii)

- Minimum contribution rates from employees and employers [½]
- to ensure that the fund is large enough to provide sufficient benefits [½]
- Auto enrol members into schemes so that they have to opt out of provision [½]
- Set a Minimum Pension Age under which citizens cannot access their pension [½]
- Make it mandatory for employers to provide access to a scheme [½]
- possibly with exceptions for very small employers [½]
- Requirements / restrictions on investments [½]
- E.g. on choice of investments (not risky investments), default fund etc [½]
- Provide regular benefit updates (with appropriate warnings) [½]
- Capital / solvency requirements for providers [½]
- Set up a central DC scheme to provide benefits to members [½]
- Ensure that the Tax Regime supports these aims, [½]

- e.g. through tax relief on contributions and tax incentives when funds are withdrawn [½]
- Make it a requirement to purchase an annuity to ensure that funds last throughout retirement [½]
- Regulate annuity market to ensure it is competitive [½]
- (could relax this requirement for those with alternative annual income) [½]
- If money can be withdrawn from the fund (income draw-down) provide limits on what can be taken out each year [½]
- Limit on expenses that are permitted by investment managers [½]
- Provide direct Government support e.g. state top up benefits, [½]
- e.g. a guaranteed investment return or fixed rate annuities [½]
- Require members to take financial advice [½]
- Educate citizens regarding the importance of pension provision [½]

[Max 8]

(iii) **Advantages**

- Overall should result in higher returns for members [½]
- Because e.g. lower administrative fees if assets managed collectively [½]
- Better security e.g. if one employer fails [½]
- Greater investment freedom [½]
- Access to assets not available to smaller funds [½]
- Flexibility if members get access to whole fund on retirement [½]
- No need for lifestyling [½]

Disadvantages

- Complicated to communicate and for members to understand [½]
- Can lead to increased risk between members [½]
- and complex decisions on benefits [½]

- particularly of different generations [½]
- Members may perceive that their funds are less secure [½]
- Members may feel less personal ownership of their pension funds [½]
- Less flexibility if in a pooled fund [½]
- With flexibility on retirement comes the risk of lack of understanding [½]
- Political risk e.g. changes by future government [½]

[Max 3]
[Total 15]

In part i a number of candidates missed some of the key information that would be included, or included more minor information.

Part ii was generally well answered.

In part iii some candidates explained the workings of collective DC rather than clearly set out the pros and cons.

Q5 (i)

- Will need to review the funding method [½]
- And the valuation assumptions [½]
- And the deficit recovery plan [½]
- The trustees may want additional prudence in the actuarial valuation, [½]
- Review the investment strategy [½]
- And hence update the assumptions accordingly [½]
- No future accrual / future service would result in the removal of the salary link (and hence the salary assumption) [½]
- With a need to replace it with deferred revaluation [½]
- The Actuary may need to re-examine the sponsor covenant [½]
- and update the allowance for prudence [½]

- for example by weakening the investment return assumptions [½]
- Members may change their behaviour [½]
- For example by retiring earlier or leaving employment. It may be necessary to update assumptions accordingly [½]
- Review the end game e.g. the intention of moving to a self-sufficiency/buy-out basis [½]

[Max 4]

(ii)

- Review the covenant to determine why the scheme closed [½]
- Trustees may feel that the sponsor covenant is weaker [½]
- and so a stronger basis is required to be adopted for future valuations to introduce an element of prudence [½]
- This may be most likely to take the form of a lower discount rate [½]
- Review the length of the recovery plan [½]
- Trustees may move to less risky / more secure investments given the change in the scheme [½]
- This will widen any deficit, and [½]
- push up expected costs for the employer [½]
- For example they may move away from equities towards gilts and high security bonds [½]
- Other investment changes e.g. more liquid assets, closer matching, LDI etc. [½]
- Consider self-sufficiency basis for funding [½]
- Consider liquidity requirements as future cashflows will change [½]
- Invest in longevity swaps / bonds to mitigate longevity risk [½]
- The trustees may look to secure some or all of the liabilities with an insurance company (a buy out or a buy-in) or wind up then scheme [½]
- Consider de-risking options and incentive exercises [½]

- May commission an immediate actuarial valuation [½]
- (although one is due imminently in any case) [½]
- Trustees are likely to want to communicate to members to explain the changes [½]
- Discuss with employer to ensure that the covenant is still good and that the employer is still willing to fund the scheme [½]
- They may also wish to discuss the alternative pension provisions for these members [½]
- If the scheme is in deficit they may want a strong commitment from the employer regarding future support [½]
- In extreme cases they could trigger a debt on the sponsoring employer if regulations allow it [½]
- May want to raise with regulatory bodies [½]
- Take actuarial / legal advice [½]
- Alternative forms of financing e.g. contingent assets, credit default swaps etc. [½]
- Review option terms and consent requirements [½]
- Many of the actions may depend on the trustee powers [½]

[Max 8]

(iii)

- **Random walk** [½]
- This is the simplest model. [½]
- It assumes that asset values move up and down without changes depending on past asset values. [½]
- Typically the moves may be taken to be from a log-normal distribution. [½]
- The random walk approach fits well with "market efficient" theories. [½]
- **Autoregressive models e.g. the Wilkie model** [½]
- These models are commonly used [½]
- And assume that returns gravitate towards a long term mean. [½]

- The Wilkie model has a built in cascade approach based on inflation [½]
- Which drives bond yields, which in turn drive equity yields. [½]

[Max 4]

(iv)

- Objectives / purpose to determine the importance of each assumption [½]
- E.g. the risk appetite [½]
- Expected returns on assets for each assets class [½]
- Expected standard deviation on asset returns for each assets class [½]
- Or the pdf / statistical distribution of the item [½]
- Correlation between asset classes [½]
- Starting conditions for deterministic assumptions [½]
- Understanding of cashflows to determine which assumptions are needed [½]

[Max 2]

(v) **Advantages**

- In theory this would mean that higher pension payouts occur when the company is better able to make them [½]
- It would share the benefits of strong corporate performance with members of the pension scheme [½]
- and may act as an incentive for members [½]
- May get higher benefits than before [½]

Disadvantages

- Share price is influenced by many external factors and so is not necessarily a good indicator of company performance, [½]
- Or the individuals performance [½]
- and particularly their cashflow situation [½]
- Likely to be very complex to design [½]

- May not fit in with prevailing legislation (e.g. if it led to a fall in pension payouts) [½]
- Concentration of risk e.g.lose job and benefits on employer insolvency [½]
- Benefits uncertain / volatile as share price is volatile [½]
- So difficult for members to plan for retirement [½]
- Could lose staff if share price increases and they crystallise benefits [½]

[Max 2]
[Total 20]

Question 5 proved to be the trickiest question in the paper, although there were a lot of marks available for the better prepared candidates.

Parts i and ii were well answered by the better candidates, who were able to set out the depth of answer required.

Part iii and iv were often not answered well, with candidates not including the two models described in the solution.

Part v required some thinking outside the box and marks were awarded where candidates had identified some of the key issues.

Q6 (i)

- pay-as-you-go [½]
- general average premium [½]
- terminal funding [½]
- scaled premium [½]

[Max 2]

(ii)

- It is likely that actuarial valuations of social security pension schemes will be undertaken at regular intervals, for example every 3 or 5 years. [½]
- The main purpose of such a valuation would be to check the long-term financial position of the scheme, [½]
- I.e. the future contribution rates required and the level of reserve funds which have been built up. [½]
- The valuation will depend on the financing method being used [½]

- In addition any proposed major changes to a scheme will need actuarial assessment, through interim valuations. [½]

- For social security schemes which are unfunded or partially funded the projection approach is usually considered the most appropriate method [½]

- Projecting social security benefit expenditure is similar in many ways to projecting benefits under occupational schemes, but there are some differences: [½]

  It is more likely to be based on population effects and data rather than scheme membership [½]

  as it is unlikely that individual data will be available, or that projections will be made at individual level [½]

  Less allowance for selection [½]

  The funding position or assets may not be relevant [½]

  - Projections are usually on an open membership basis, allowing for future new entrants, rather than just considering current members and their accrued rights [½]

  - There is no fixed idea of a "member", a "deferred member", etc. [½]

    Membership will vary with employment, unemployment, etc., throughout an individual's career, with people moving back and forth between groups [½]

  - The demographic projections need to be combined with projected estimates of the: proportions of the population who are contributors or beneficiaries of the scheme, [½]

  - contributory salary of contributing members; and [½]

  - amounts of benefits payable to different categories of beneficiary [½]

  - Consider the allowance for expenses and other costs [½]

  Demographic assumptions that may be needed include:

  - mortality improvements [½]

  - future fertility [½]

  - future migration [½]

    - price inflation [½]
    - earnings inflation [½]
    - rate of pension increases [½]
    - contribution earnings limit increases [½]
    - economic activity rates [½]
    - invalidity rates [½]
    - age of retirement [½]
      [Max 2 marks for 4 examples]

- Project mortality rates (i.e. not just the improvements but the actual rates) [½]
- Project migration both in and out [½]
- Description of the calculations under different funding methods / approaches [½]
- Different models that may be used e.g. component model, exponential model etc. [½]
- Smooth costs / results with contingency fund [½]
- Projection of costs with contributions to determine a percentage rate [½]
- Level and form of benefits before projecting [½]
- Either the factor method or the survival method may then be used to determine the required contribution rates [½]

[Max 8]

(iii)

- This may lead to less inward migration to the country [½]
- which may have a negative economic impact [½]
- It could be considered as an indirect form of age discrimination [½]
- (i.e. as citizens need to have worked for 2 years before getting benefits) [½]
- Might encourage migrants to stay for longer [½]
- Although they might leave immediately after 2 years [½]

- It may reduce the impact of abuses of the system and be seen as "fairer" [½]
- as people will have had to have paid in for a period of time before receiving benefits [½]
- Will reduce administration costs [½]
- Will reduce benefit costs [½]
- Extra costs of policing benefits [½]
- Can build up surplus if funding in advance for the benefit if the citizen leaves [½]

[Max 2]
[Total 12]

Question 6 was reasonably well answered by most candidates.

Part i was standard bookwork and well answered.

Part ii was one of the harder parts to the paper but many candidates had a reasonable go at it. The better candidates were able to map general pension scheme funding issues to the specific question.

Part iii was generally well answered.

END OF EXAMINERS' REPORT