

# **INSTITUTE AND FACULTY OF ACTUARIES**

## **EXAMINERS' REPORT**

April 2022

### **SA4 – Pensions and Other Benefits Specialist Applications**

#### **Introduction**

The Examiners' Report is written by the Chief 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 Specialist Advanced (SA) and Specialist Principles (SP) 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.

Sarah Hutchinson  
Chair of the Board of Examiners  
July 2022

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

The aim of the Pensions and other Benefits Specialist Applications subject is to instil in successful candidates the ability to apply knowledge of the pensions and employee benefit environment and the principles of actuarial practice to providers of pensions and employee benefits both in the United Kingdom and the rest of the world.

This subject examines the ability of candidates to apply actuarial practice and concepts to potentially complex problems, integrating their analysis into a coherent whole, and evaluating and interpreting results to draw explicit conclusions.

From 2019 the requirement for detailed knowledge of the UK's legislative and regulatory frameworks was moved to the UK Practice Modules (UKPM). The Specialist Advanced subjects will still require knowledge of the principles of the UK market and regulatory regimes but there has been a re-balancing to include comparison between different jurisdictions and expansion in non-UK-specific topics.

The Examiners therefore look for candidates to demonstrate their understanding of the syllabus but in particular they need to demonstrate ability in applying their knowledge and core actuarial skills to the specific situations that the Examiners have raised, having read the question carefully. Consistently, many of the unsuccessful candidates provide answers that are not sufficiently specific to the subject matter of the question, reproduce core reading that does not directly relate to the question context, or focus on one specific point without covering a sufficient range of points to answer the question. This does not enable the candidates to achieve the required marks. The Examiners encourage future candidates to remind themselves of what they learned in the Core Actuarial subjects, and to use past paper questions to practise applying these skills to the specific scenarios tested.

Good candidates demonstrate that they have structured their solutions well - this is a big advantage in making points clearly and without repetition. There is a significant incidence of points being repeated in slightly different ways, restricting the scope for candidates to score marks. Good structure 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. 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 instruction - for example an instruction to list points should be answered with a list without attaching discussion. Similarly, a question asking for a discussion cannot be answered with a list of undeveloped points.

Finally, it is very helpful to the Examiners if candidates clearly identify points made; if they are set out clearly, well-spaced and easily legible. Whilst there is no loss of marks for not doing so, doing so does make it easier to identify scoring opportunities.

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

## **B. Comments on candidate performance in this diet of the examination.**

Better candidates were those who read the questions carefully, tailored their answers to the questions and responded to the specific question, rather than just writing about what they know on a particular subject.

The paper also required candidates to think beyond the obvious answers in a number of places, and the better prepared candidates were able to bring in ideas from other areas of the course to score higher marks in these parts.

Application aspects of the course were found more challenging by candidates. This is an area that SA4 candidates consistently need to work harder on in preparation. By taking a methodical approach to answers, step by step, however, there are opportunities to score well. It is important that candidates make sure they provide a full answer to all questions.

The importance of structure in the exams should not be underestimated because this will lead to much more efficient work post exams. It is harder to get good marks in the absence of a good structure because it means that logical points are more likely to be missed. Sometimes points are just repeated further through the answer meaning that the response was more likely to look of sufficient length than it really was for the marks available. The computer-based format should make it easier to structure answers well.

Breaking the question down into smaller parts helps to make sure that a suitable breadth of answer is supplied. It is critical that candidates check that their answers specifically refer to the details of the question, using all the information in the question pre-amble. It is not the intention of the examiners to include information in the questions that is not relevant to the answers.

## **C. Pass Mark**

The Pass Mark for this exam was 57.  
189 presented themselves and 55 passed.

## Solutions for Subject SA4 – April 2022

### Q1

(i)

A requirement in the UK such that employees not currently in an employer-related pension arrangement must be automatically enrolled into a scheme provided by their employer [1]

(ii)

*Pros for one group may be cons for another. A mark should be given if the pro/con is correctly identified even if different from below*

Pros:

Will get many more people saving for retirement	[1]
Many employers who previously didn't provide a pension will be forced to	[½]
And employers may have to contribute too	[½]
Could also be increased by State too via tax system	[½]
Initial contribution rates could be low so don't really notice deductions	[½]
Could result in creation of low cost savings vehicle	[½]
And savings can be easily transferred when moving employers	[½]
Members can always opt out if don't want to contribute	[½]
Should raise awareness of the importance of pension provision	[½]
Could reduce costs to the State as State provision could be reduced to reflect greater anticipated occupational provision	[½]
Parties may benefit from economies of scale, for example achieve better investment returns, reduced administration costs	[½]
There could be positive macroeconomic effects from greater investment	[½]

Cons:

Contribution rates could be set too low to provide adequate savings for retirement	[½]
Employers who provided better schemes could reduce to minimum requirement	[½]
Employers could also reduce pay increases to compensate for pension contributions	[½]
Members take home pay will be reduced	[½]
Additional costs could put strain on employer's business, risking jobs	[½]
Self-employed may be missed out	[½]
Doesn't cover the non-employed who as a consequence may not be provided with adequate pension provision	[½]
Administration costs may be disproportionate for short stayers	[½]

(Marks available 11½, maximum 6)

(iii)

The rule of thumb assumes that once you start paying a rate you keep paying at that rate for the period until retirement	[½]
So for a 20 year old it will be 10% p.a. 40 year old 20% and 60 year old 30%	[½]
The increase in the rate of contribution as members age could have been set to reflect the shorter investment period to retirement	[½]
... and the need to catch up for earlier years where contributions weren't made	[½]
Suitability will depend on many factors such as member characteristics and circumstances	[½]
Including chosen retirement age	[½]
And the tax regime	[½]
Other retirement provisions	[½]
Such as any state pension	[½]

Or other savings, assets and wealth which could be used in retirement [½]  
 As well as contributions being enhanced by employer or state [½]  
 e.g. through tax system [½]

Example Calculations:

Assumptions (anything reasonable will do, salary is irrelevant if basing it on NRR)  
 NRA 65 [½]  
 Salary increases - 3% [½]  
 Investment return - 5% [½]  
 Annuity rate at NRA - 30 [½]

Fund accumulated at NRA based on 10k salary (again, anything close to these figures should get a mark)

20 year old - £267k [½]  
 40 year old - £132k [½]  
 60 year old - £18k [½]  
 NRR at 65 for each age  
 20 year old:  $267 / 30 / (10 * 1.03^{45}) = 24\%$  [½]  
 40:  $132 / 30 / (10 * 1.03^{25}) = 21\%$  [½]  
 60:  $18 / 30 / (10 * 1.03^5) = 5\%$  [½]

Does not seem enough on its own at any age [½]  
 Although will depend on investment returns [½]  
 and savings accumulated from before these contributions commenced  
 20 year old gets the best result but pays for longest period [½]  
 which equates to an accrual rate of around 190th ( $45/190 = 24\%$ )  
 But they may have other priorities for money [½]  
 Such as saving for a house, or getting married [½]  
 Or could still be in full time education [½]  
 And they are likely to have a very long time to save [½]  
 20% for a 40 year old would seem more reasonable but results in lower NRR [½]  
 which equates to an accrual rate of around 120th ( $25/120 = 21\%$ ) [½]  
 Especially if they have other retirement provision that they have already saved into [½]  
 which equates to an accrual rate of around 100th ( $5/100 = 5\%$ ) [½]  
 For a 60 year old 30% is nowhere enough to provide a reasonable income in retirement [½]  
 Although very likely to have other retirement savings [½]  
 And older people more likely to have higher savings in property [½]  
 If the guideline were to be set to accrue broadly a 60th of benefit each year in order to  
 target a NRR of 67% after 40 years' service ... [½]  
 then the contribution rates need to be increased to 30% for a 20 year old ( $10 * 190/60$ ), 40%  
 for a 40 year old ( $20 * 120/60$ ) and 50% for a 60 year old ( $30 * 100/60$ ) [½]  
 Similarly if the guidelines were to be set to accrue broadly an 80th of benefit each year in  
 order to target a NRR of 50% after 40 years' service ... [½]  
 then the contribution rates need to be increased to 24% for a 20 year old ( $10 * 190/80$ ),  
 30% for a 40 year old ( $20 * 120/80$ ) and 38% for a 60 year old ( $30 * 100/80$ ) [½]  
 If age-related contribution rates were to be introduced then at earlier ages lower  
 contribution rates could be set which could increase with age. [½]

[Marks available 20, maximum 10]

(iv)

Advantages:

Fairer to pension scheme members	[½]
As all members will receive the same rate of tax relief on contributions	[½]
Especially compared to current system where lower earners receive lower tax relief contributions too, which seems doubly unfair	[1]
So tax would be re-distributive	[½]
In theory, simpler to operate	[½]
and understand	[½]
Although current system probably fits in well with current tax collection	[½]
Could encourage younger savers, who are more likely to be lower rate taxpayers	[½]
Could encourage lower-tax payers to save for retirement ...	[½]
resulting in higher pension benefits for lower-tax payers which could help meet a State objective concerning adequacy of provision	[½]

Disadvantages:

Higher rate taxpayers may feel harshly done by	[½]
And be discouraged to saving for retirement	[½]
How would employer contributions be dealt with?	[½]
Could be classed as business expense	[½]
Higher earners could use salary sacrifice arrangement which would effectively be same as higher rate tax relief	[½]
Could be politically unpopular	[½]
Could result in higher tax relief costs to the government depending on the balance of higher-rate versus lower-rate taxpayers	[½]
although this may be mitigated if there is a reduction in any means-tested State benefits	[½]

[Marks available 9½, maximum 6]

(v)

Savers will generally receive higher rate of tax relief at younger ages than before	[½]
And lower at older ages	[½]
Assuming salaries increase with age	[½]
This means a lower rate of contribution at lower ages would be required to achieve the same level of savings at retirement	[½]
Conversely younger savers could pay more due to higher tax relief	[½]
However savings will increase more slowly at older ages for higher rate taxpayers	[½]
So they could look for more tax-efficient savings vehicles	[½]
Assuming the rule of thumb was previously suitable then it would now need to be amended to reflect this change in tax relief	[½]
assuming salaries increase with age this would imply that a lower percentage saving is required at a younger age and a higher percentage saving is required at an older age to achieve the same aim	[½]

[Marks available 4½, maximum 4]

**[Total 27]**

*In Part (i) many candidates scored full marks.*

*Part (ii) was generally well answered but less prepared candidates found challenging to come up with sufficient examples, particularly disadvantages.*

*In Part (iii) only well prepared candidates were able to complete the calculations and write some sensible points around them. More commentary was needed by candidates on the expected outcome for each age.*

*In Part (iv) only well prepared candidates understood how the flat tax rate would work. These unusual questions are differentiators as they require some lateral thinking which the better candidates are able to do and scored well here.*

*In Part (v) only better prepared candidates made sensible points and score marks.*

## Q2

(i)

A strategy and practice to incorporate environmental, social and governance factors in investment decisions and active ownership. Factors considered under such a strategy might include climate change, employee relations and tax strategy. [1]

(ii)(a)

Environmental

Climate change [1/2]

resource depletion [1/2]

waste [1/2]

pollution [1/2]

deforestation [1/2]

carbon emissions [1/2]

water management [1/2]

Social

human rights [1/2]

modern slavery [1/2]

child labour [1/2]

working conditions [1/2]

employee relations [1/2]

community relations [1/2]

Governance

bribery and corruption [1/2]

executive pay [1/2]

board diversity and structure [1/2]

political lobbying and donations [1/2]

tax strategy [1/2]

*Max 1 point from each section*

(ii)(b)

An investment strategy taking into account ESG factors may be driven by ethical

principles.	[½]
This may restrict the range of assets available for investment	[½]
hence negatively impact on investment performance	[½]
possibly resulting from restrictions in the underlying company's business activities,	
reducing sales and profit	[½]
or increasing costs for the underlying businesses, reducing profit	[½]
or increasing the costs for the scheme of monitoring investments	[½]
or increasing transaction costs for the scheme, e.g. if disinvestment must take place from	
companies that no longer comply with the scheme's desired ethical standards.	[½]
However, arguments exist to support the view that incorporating ESG factors can	
improve investment performance	[½]
through increasing returns and/or reducing risk.	[½]
As incorporating ESG factors can improve investment performance, consideration of	
ESG factors forms part of trustees' fiduciary duty to act in the best interests of	
beneficiaries	[½]
For example, ESG-motivated companies might reduce costs through more efficient use	
of energy and raw materials	[½]
be subject to less financial impact if governments impose pollution taxes or minimum	
wages	[½]
Benefit from government incentives/subsidies designed to encourage global goals on	
climate, energy	[½]
and/or sustainable development	[½]
Avoid reputational damage from controversial practices such as modern slavery	[½]
See greater returns arising from better working conditions for staff which aids	
recruitment, retention and motivation.	[½]
ESG-motivated companies might have a more diverse range of individuals on the Board,	
giving rise to improved corporate performance	[½]
One of the drivers for the rising interest in ESG investment has been increasing legislative	
requirements and regulatory expectations	[½]
Trustees may take account of non-financial factors if they have good reason to think that	
scheme members share a particular view and their decision does not risk significant	
financial detriment to the scheme.	[½]

[Marks available 18½, maximum 7]

(iii)	
Removing long term reliance implies self-sufficiency basis	[1]
or possibly buy out with an insurer or transfer to a non-insurance consolidator	[½]
Removing the reliance on the sponsor may not be possible unless the scheme is closed to	
future accrual	[1]
What is scheme currently invested in?	[½]
Is there a lot of return seeking assets?	[½]
How strong were the assumptions for the TP basis?	[½]
Were they reliant on additional returns from return seeking assets?	[½]
Or would scheme still have surplus with discount rate in line with self-sufficiency?	[½]
and what is the position on the buy-out / consolidator basis	[½]
If a surplus exists on these bases then changes to the investment strategy could be	
implemented immediately to 'lock-in' the surplus	[½]
What is the sponsor's view on changes to the investment strategy?	[½]
Why do the trustees wish to remove the reliance on the sponsor?	[½]

How strong is the sponsor covenant?	[½]
If it is strong then can take a more risky approach to investment and the trustees may be prepared to set a longer time frame for changes to the investment strategy	[½]
But if weak then will want to move to more matched strategy	[½]
Although this could remove surplus	[½]
Depends on willingness of sponsor and how it intends to make up difference	[½]
Sponsor may want to achieve higher returns	[½]
Which will reduce contribution requirements in long term	[½]
And willing to take risk of having to pay more in if strategy fails	[½]
Scheme is mature, which suggests a matching strategy would be largely bonds or similar	[½]
Need to consider the type of bonds to match the nature and currency of the scheme liabilities	[½]
Need to consider liquidity to meet cash flow requirements as a mature scheme may have negative cashflow particularly as contributions may be being reduced due to the surplus	[½]
To minimise risk a diversified portfolio of assets should be held both by asset class and within asset class	[½]
Any restrictions to the investment policy should be considered such as any within the scheme documentation or legislation	[½]
Asset liability modelling would be useful to determine an appropriate strategy	[½]
Need to take investment and actuarial advice	[½]
Could result in phased move to self-sufficiency	[½]
Have there been any post-valuation events that have changed funding position?	[½]
If it has worsened then may reduce ability to de-risk	[½]
	[Marks available 16, maximum 10]

(iv)

Employer reliant on sports events happening so extreme weather could significantly affect income stream	[1]
Even if events can carry on then bad weather might reduce attendances	[½]
And also income from hospitality	[½]
Traditionally sport has relied on sponsors from oil and petrol based industries so potential sponsorship deals may be reduced	[½]
Insurance costs for weather related injuries postponements could also increase	[½]
Climate change could also increase costs of hospitality e.g. champagne	[½]
And reduce people travelling from overseas due to carbon footprint	[½]
Conversely it could also increase the number of local attendees	[½]
Extreme weather events could cause damage to the club's property	[½]
	[Marks available 5, maximum 4]

(v)

Does this investment fit in with investment strategy agreed above?	[1]
How much influence does the sponsor have over investment strategy?	[½]
Ultimately it is the sponsor paying the costs of the scheme so not unreasonable to have a say	[½]
Will sponsor provide a guarantee should investment in the managed fund lead to poor returns?	[½]
What proportion of the fund does the sponsor wish to be invested in this managed fund?	[½]
Higher proportion higher risk	[½]

Ultimately employer is responsible for cost of the scheme	[½]
If Trustees are de-risking, then this may not be appropriate	[½]
Although it could be used to broadly match active liabilities if they exist	[½]
Global equities could also increase currency risk	[½]
Unless it is hedged	[½]
However, if an element of return seeking assets is required it may be appropriate	[½]
Although the expected return should be considered against other return seeking assets	[½]
And provide some diversification from the current portfolio	[½]
As well as mitigating some of the risks mentioned in (ii)	[½]
Does the investment manager have a good rating?	[½]
Will the portfolio be managed active or passively?	[½]
What will the management charge be?	[½]
And the transaction costs?	[½]
Are there any tax implications from it being a global fund	[½]

(Marks available 10½, maximum 8)

**(Total 30)**

*In Part (i) most candidates got full marks.*

*In Part (ii) most candidates got the factors in part a. Only well prepared candidates scored high marks in part b.*

*In Part (iii) better prepared candidates focussed on the relevant points around self-sufficiency, sponsor covenant and scheme maturity scored well.*

*Part (iv) was well attempted with some good, relevant and thoughtful comments. This unusual differentiator question requires candidates to think a bit differently.*

*In Part (v) most candidates performed well. Well prepared candidates tailored their answers enough and set out standard investment comments with reference to the specific points mentioned in the question.*

### Q3

(i)

Increase NRA	[½]
Reduce accrual	[½]
Cap salary increases	[½]
Cap salary	[½]
Change pensionable salary definition	[½]
Reduce pension increases	[½]
Cease accrual	[½]
Reduce dependants' benefits	[½]
Reduce death benefits	[½]
Remove generous options such as early retirement	[½]
Change form of benefits e.g. career average	[½]
Remove any discretionary benefits	[½]

[Marks available 6, maximum 4]

(ii)

Trustees		Members	
Advantages	Disadvantages	Advantages	Disadvantages
The risk in the DB section will be reduced which will improve security	Member dissatisfaction	Better than closure to accrual	Lower guaranteed pension
For example salary risk will reduce	More administration and communication complexity	Guaranteed benefit means DC could be invested more riskily looking for higher return so could eventually get higher benefit	Risk partially transferred to member
It is also likely that longevity risk will reduce as those with higher salaries may have greater expectations of life	Potential lack of expertise concerning DC provision		
Full final salary benefit for lower paid staff	Possible funding strain when members withdraw	Greater flexibility in investment and benefit choices in DC section	Will need to make investment decisions
Still provides level of guaranteed benefit			Potential lack of understanding concerning DC provision
Disclosed funding level will improve, and SCR reduce, under the PUM due to limited salary growth on some liabilities		DC section likely to be fully funded	Replacement DC provision may be less generous
which could be considered to improve security			
and enhance the sponsor's commitment to the scheme			

[5]

(iii)

Assumptions:

NRA is 65 (or other reasonable age)

[½]

No withdrawal from active assumption in original liabilities

[1]

Ignore pre-retirement mortality

[½]

The scheme benefits are based on final pensionable salary

[½]

20 year old

Estimated salary at NRA -  $20,000 \times 1.03^{45} = 75,632$  [½]  
 SCR based on salary capped at 40,000 -  $30\% \times 40,000 / 75,632 = 15.9\%$  [½]  
 AL based on 40,000 cap -  $10,000 * 40,000/75,632 = 5,289$  [½]

40 year old

Estimated salary at NRA -  $30,000 \times 1.03^{25} = 62,813$  [½]  
 SCR based on salary capped at 40,000 -  $40\% \times 40,000 / 62,813 = 25.5\%$  [½]  
 AL based on 40,000 cap -  $180,000 * 40,000/62,813 = 114,625$  [½]

60 year old

Estimated salary at NRA -  $34,000 \times 1.03^5 = 39,415$  [½]  
 Not affected by cap so no change to SCR or AL [½]

Scheme overall

Average age of actives is 40 and average salary is  $\$2.25m/750 = 30,000$  [½]  
 So assume change overall is similar to 40 year old above [½]  
 SCR would be 25.5% and AL  $\$180m \times 114,625/180,000 = \$115m$  [½]  
 This assumes that the average is 40 when weighted by both AL and salary [1]  
 The total AL is therefore  $\$555m$  ( $115 + 200 + 240$ ) [½]  
 leading to a surplus of  $\$25m$  (using assets of  $620 - 40 = 580$ ) [½]  
 Additional assumption is that a lot of actives haven't left scheme when cap was  
 announced as some may be better off leaving, especially if they have long service [½]

[Marks available 10½, maximum 10]

(iv)

As SCR has only 1 year control period the AL is affected more by changes in future salaries [1]  
 The SCR has fallen by more than estimated above [½]  
 For the SCR the average age weighted by salary is not 40 [½]  
 Although the cap has a larger absolute effect on the 20 year old above, older members may already be earning at the cap so the effect will be increased [½]  
 Before the change the total SCR would have been heavily weighted by the higher salaries at older ages [½]  
 After the cap, this weighting to higher pensionable salaries would be reduced significantly so average age weighted by liability would have decreased [½]  
 The AL has fallen by less than estimated above [½]  
 This could be because the average age weighted by liability was higher than 40 [½]  
 The liabilities of older members are reduced by less than younger members as cap has less time to take effect [½]

(v)

Liabilities on last time's basis

Assumptions:

Average ages stay same (or 1 year different maybe) [½]  
 1% change in post-retirement discount rate makes 20% difference for non-pensioners [½]  
 And 15% difference for pensioners [½]  
 No allowance for movements [½]  
 Salary increase on average half way through the year [½]  
 Contributions paid half way through year [½]  
 Pensioner payroll of  $\$10m$  based on liability of  $240m$  and annuity of 24 (or anything

reasonable) [½]

Liabilities on last time's basis

Actives:  $180 \times (1.02/1.025)^{25} \times (1.03/1.032)^{25} / (1+20\% \times 0.7) = 133$  [1½]

Deferreds:  $235 \times (1.02/1.025)^{15} \times (1.02/1.022)^{15} / (1+20\% \times 0.7) = 186$  [1½]

Pensioners:  $250 / (1 + 15\% \times 0.7) = 226$  [1]

Total = 545 so change of basis is \$120m [½]

Liabilities split roughly 60/40 non-pensioners so assume expected return split same way

$0.6 \times 2.5 + 0.4 \times 1.5 = 2.1\%$  (or any other reasonable assumption) [½]

Interest on deficit is  $\$40m \times 2.1\% = \$0.84m$  [½]

Contributions were paid in line with the SCR as cap only just started so no contribution to AoS [½]

Assets:

Expected assets  $580 \times 1.021 + 0.4 \times 22.5 \times 1.021^{0.5} - 10 \times 1.021^{0.5} = 591$  [1]

Actual assets \$600m so additional return of £9m [½]

Benefit change (Cap)  $\$180m - \$140m = \$40m$  profit [½]

Salary increases:

Actives last time (capped)  $\$140m \times 1.02/1.03 = \$138.6m$  so £1m profit [½]

Inflation increases:

Deferreds and pensioners:  $(\$200m + \$240m) \times 1.03/1.02 = \$444m$  so \$4m loss [½]

Possible changes to contributions and pensions paid due to

Deficit	(40)
Interest on Deficit	(1)
Actual return more than expected	9
Benefit Change	40
Salary Increase	1
Inflation higher than expected	(4)
Change of basis	(120)
Miscellaneous	50
New Deficit	(65)

Complete table [1] and miscellaneous item making it balance [½]

Miscellaneous item large so would require further investigation [½]

But could be down to salary cap being implemented and effect on members' benefits not being in line with expectations [½]

[Marks available 15, maximum 10]

(vi)

Withdrawals [½]

Mortality [½]

Early/late retirement [½]

Options, such as cash at retirement [½]

Marital statistics i.e. proportion married [½]

Or age of spouse [½]

Transfers out [½]

Incentive exercises [½]

Redundancies [½]

New entrant experience [½]

Change of funding method	[½]
Expenses	[½]
Use of insurance e.g. buying out some pensioner members	[½]
	[Marks available 6½, maximum 3]

(vii)

Both options:

May still need to provide pension benefits through other vehicle [½]

Such as a DC scheme [½]

Although contributions could be lower [½]

And fixed so known in advance [½]

This consideration seems to conflict with the new DC section which may have been introduced as part of capping pensionable earnings [½]

The sponsor should consider the expenses of running a closed scheme and the costs of closure [½]

Closing the scheme is likely to lead to a review of the investment strategy and sponsor covenant [½]

which in turn may lead to a more prudent funding approach which could increase the deficit and contribution requirements [½]

Closure to new entrants:

Will not change the deficit [½]

so deficit payments will still be required [½]

And SCR likely to increase over time, as a percentage of salaries, as average age increases [½]

Closure to accrual

Could possibly increase the deficit [1]

If any revaluation in the scheme is greater than any possible earnings increase [½]

Which is highly likely due to earnings cap [½]

So deficit contributions could increase [½]

Scheme Rules could require salary link is retained [½]

So members could get the best of salary increases or scheme revaluation [½]

Which could therefore increase the cost to the employer [½]

Although no contributions in respect of future accrual will be required [½]

[Marks available 10, maximum 6]

**(Total 43)**

*Part (i), generally answered well by candidates.*

*Part (ii) Fairly well answered.*

*Part (iii) Most candidates did the calculations for part a. Well prepared candidates stated assumptions which is a very easy way to score marks.*

*Part (iv) This was a challenging question and not many candidates scored well. The better candidates were able to understand the point the question is asking.*

*In Part (v) Candidates found challenging numerical questions. However, it was possible to score marks for assumptions and method without actually doing the calculations.*

*Part (vi) Generally well answered*

*Part (vii) Better candidates thought widely enough to get higher marks, e.g. to explain the different impact of closing to new entrants or future accrual.*

**[Paper Total 100]**

**END OF EXAMINERS' REPORT**