INSTITUTE AND FACULTY OF ACTUARIES

April 2017

CA3: Communications

Paper 1

Time allowed: 1 hour 30 minutes + 15 minutes reading time

INSTRUCTIONS TO THE CANDIDATE

1. You have 15 minutes reading time at the start of the examination in which to read the questions. You are strongly encouraged to use this time for reading only, but notes may be made. You then have 1 hour 30 minutes to complete the paper.

2. You must write your submission from the beginning and not use an imported e-template.

Your file names must include your ARN and each file should also contain your ARN as a header or footer.

Please note that the content of this paper is confidential and students are not to discuss or reveal the contents under any circumstances nor are they to be used in a further attempt at the exam.

If you encounter any issues during the examination please contact the Online Education team at online_exams@actuaries.org.uk T. 0044(0) 1865 268 255

You are an actuarial student who is on secondment to your pension administration department. One of their clients is the DE Pension Scheme; an occupational pension scheme based in a developed country, Country X. The customer service team has received the following letter relating to the DE Pension Scheme and has forwarded it on to the administration department's manager, Hannah:

7 April 2017

Dear Sirs,

<u>Re: Pension payroll number 56565</u>

I have received a letter from you dated 22 March 2017 informing me of a change in my pension from 1 June 2017. I must say I find your letter very confusing and think there must be some mistake. You say that I am due an increase in pension and some back-payments but then are showing a negative amount for interest which I assume means that I owe the scheme money. Please can you review and get back to me as I would like to understand how this can have occurred. I am a pensioner on limited means and find this very confusing and distressing. I have enclosed a copy of the letter that you sent me for information.

Yours faithfully,

Mr Smith

DE Pension Scheme Letterhead

22 March 2017

Dear Mr Smith

DE Pension Scheme – Pension payroll number 56565

I am writing to inform you about a change in pension that will take place from 1 June 2017. The change in pension is in respect of changes that are required as a result of a reconciliation that has taken place between the DE Pension Scheme and the state scheme in Country X.

The DE Pension Scheme is writing to all members to let them know the impact this has on their benefits. Please read the section below relating to your particular circumstances.

Deferred member:
- *change in total pension n/a*
- *your total pension has been amended to revise the split between the state scheme part and scheme part at the date you left the scheme*
- *details of how this will affect your benefits will be provided with your next annual benefit statement*

Pensioner member:
- *the revision in your pension is +101.78 p.a.*
- *back-payments due are +148.44*
- *interest on back-payments due are –47.89*

Dependant member:

- *the revision in your pension is n/a*
- *back-payments due are n/a*
- *interest on back-payments due are n/a*

If you are due an increase in your pension then this change will take effect from the 1 June 2017 payroll. If you are due a reduction in your pension then this will not take effect until 1 August 2017. This is to give you sufficient notice of the reduction in pension. Payments of back-payments and interest will take place at the same date as the revision to your pension. However, if overall you have been overpaid (i.e. the total of your back-payments and interest are negative) then the trustees have agreed that any payments will be collected in equal amounts over the next year. You will be provided with additional details if this applies to you.

All figures quoted are in £.

Yours sincerely,

Name
DE Pension Scheme Administrators

Your manager (Hannah) has sent you the following email:

Luke

It is unfortunate that the information on the changes in pension have been dealt with in a way that has confused Mr Smith. Please can you draft a suitable response to him. This should deal with his situation only and not include details relevant to deferred pensioners etc. You should include the following information in your response:

- *some background information on why we are making these changes*;*
- *details of Mr Smith's pension when he retired, both before and after the change was made. This is so he can understand why the change is necessary.*
- *you need to explain why having a different breakdown of his total pension into the state pension component and scheme pension component impacts the calculation;*
- *you should provide sufficient information to assist him in understanding how he can have a negative interest component but positive back-payments overall.*

A graph may help to explain how there have been periods of overpayment and periods of underpayment in the past.

Please draft a suitable response to Mr Smith in around 600 words including an appropriate graph.

Thanks

Hannah

** I know that some details were included in his letter of 22 March 2017 but this new letter should be a stand-alone document so he doesn't need to refer to the previous letter.*

In addition you have been provided with the following information to help you construct your response.

Details of member

Surname	Smith
Pension payroll number	56565
Gender	Male
Date of birth	01/05/1944
Date of leaving scheme	01/05/2004
Date of retirement	01/05/2004
Total Pension on retirement	2,850.00 p.a.

Scheme Benefits

The total pension put into payment on the member's retirement on 1 May 2004 is £2,850 p.a. This pension is split into two different components. The scheme component and the state pension component (SPC). Both components are paid by the DE Scheme.

The DE Scheme must ensure the two components are set up correctly for individuals at retirement , because different pension increases apply on the two different components of the member's pension (the state pension component (SPC) always gets lower increases).

Changes to State Pension Component

The state pension scheme has recently provided revised information which has indicated that the breakdown of member's total pensions into the scheme component and the state pension component has been incorrect. Our legal team has advised us that we must make the necessary changes to correct members' pensions as a result. Where benefits have been over or underpaid in the past these must also be rectified. Where there is an underpayment the scheme will repay this together with any change to the pension on the beginning of the next scheme year, i.e. 1 June 2017. Where there has been an overpayment these will be collected from 1 August 2017 but the amounts will be collected monthly over the remaining 10 months of the scheme year.

Mr Smith's Retirement Benefits

The existing pension at the date of retirement (1 May 2004) was correct at £2,850 p.a. It was set up as £1,900 p.a. relating to the scheme component and £950 p.a. relating to the state pension component.

The revised details mean that the split of the member's total pension at retirement on 1 May 2004 should have shown £2,700 p.a. relating to the scheme component and only £150 p.a. relating to the state pension component.

The following table illustrates the build up of Mr Smith's pension from retirement on 1 May 2004 to the present day using the existing split of pension at retirement, and the revised split of pension at retirement. The table also shows the back-payments and interest due.

	Existing Pension £ p.a.				**Revised Pension £ p.a.**				**£**	**£**
Year (see note (1))	**Scheme Part**	**SPC Part**	**Total Pension**		**Scheme Part**	**SPC Part**	**Total Pension**		**Back-payments**	**Interest**
2017	3,463.89	1,611.07	**5,074.96**		4,922.36	254.38	**5,176.74**		-	-
2016	3,363.00	1,579.48	4,942.48		4,778.99	249.39	5,028.39		85.91	3.44
2015	3,265.04	1,548.51	4,813.56		4,639.80	244.50	4,884.30		70.75	5.77
2014	3,169.95	1,518.15	4,688.09		4,504.66	239.71	4,744.37		56.27	7.03
2013	3,077.62	1,488.38	4,566.00		4,373.46	235.01	4,608.46		42.47	7.21
2012	2,987.98	1,459.20	4,447.17		4,246.07	230.40	4,476.47		29.30	6.35
2011	2,845.69	1,403.07	4,248.77		4,043.88	221.54	4,265.42		16.65	4.42
2010	2,710.18	1,349.11	4,059.29		3,851.31	213.02	4,064.33		5.04	1.59
2009	2,581.13	1,297.22	3,878.35		3,667.92	204.82	3,872.74		–5.61	–2.07
2008	2,458.22	1,247.33	3,705.54		3,493.26	196.95	3,690.20		–15.34	–6.49
2007	2,341.16	1,199.35	3,540.51		3,326.91	189.37	3,516.28		–24.23	–11.64
2006	2,188.00	1,131.47	3,319.46		3,109.26	178.65	3,287.91		–31.55	–17.02
2005	2,044.86	1,067.42	3,112.28		2,905.85	168.54	3,074.39		–37.89	–20.44
2004	1,911.08	1,007.00	2,918.08		2,715.75	159.00	2,874.75		–43.33	–26.04
1 May 2004	**1,900.00**	**950.00**	**2,850.00**		**2,700.00**	**150.00**	**2,850.00**		-	-
Total									**148.44**	**–47.89**
Factor	*1.8231*	*1.6958*			*1.8231*	*1.6958*				

(1) All figures are shown at 1 June after the increase has been made for that year, except for the bottom row which shows the Pension at 1 May 2004.

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Why does it matter that the pension is split into two different parts?

It matters because the scheme gives different pension increases on the different parts of the pension (the state pension component (SPC) always gets lower increases). There is also a difference in the way that the first year increase is granted and the calculation of the first year increase is shown below to demonstrate this:

Existing Pension – calculation of first year's increase

Pension at 1 June 2004 $= 1900.00 \times (1 + 7\% \times 1/12) + 950.00 \times (1 + 6\%)$
$= 1911.08 + 1007.00$
$= £\ 2{,}918.08$ p.a.

Revised Pension – calculation of first year's increase

Pension at 1 June 2004 $= 2700.00 \times (1 + 7\% \times 1/12) + 150.00 \times (1 + 6\%)$
$= 2715.75 + 159.00$
$= £\ 2{,}874.75$ p.a.

In both cases the scheme component only receives an increase of 1 month (reflecting the period between the retirement date (1 May 2004) and first increase date (1 June 2004) calculated in complete months). The scheme increase for the whole year at 1 June 2004 was 7%.

The state pension component receives a whole year's increase. The state pension component increase at 1 June 2004 was 6%.

After the first year, both parts of the pension receive a whole year's increase every year, i.e. on each subsequent 1 June. The annual increases on the scheme part of the pension are always bigger than those on the state pension part of the pension. You can see that the overall increases on the scheme part of the pension are larger than on the SPC part of the pension as the final line of the table shows the factors that would need to be applied to get from the starting pension at 1 May 2004 to the final pension at 1 June 2017. The overall increase on the scheme part is 82.31% whereas the increase on the SPC part is 69.58%.

These cumulative factors can be used to work out the change in pension at 1 June 2017 $= (150 - 950) \times (1.6958 - 1.8231) = £101.84$ p.a. This is similar to the difference between the existing pension and the revised pension at 1 June 2017 i.e. $(5{,}176.74 - 5{,}074.96) =$ £101.78 p.a. (The small differences reflect inaccuracies through rounding of the cumulative factors.) The pensioner therefore needs to have his pension increased by £101.78 p.a.

Back-payments

The back-payments column shows the difference between the existing pension and the revised pension paid. No back-payments are due for the year commencing 1 June 2017. Overall the member is due total back-payments of £148.44.

Interest

The scheme is required by its rules to charge interest on back-payments. The interest column shows the yearly interest due. This has been calculated by applying 4% interest compound to the under or overpayment where relevant, over the period from the date of payment to 2017. Overall the member owes the scheme £47.89. This is because of the impact of the way that the first year's increase is calculated.

Overall Mr Smith will receive a one off payment of £100.55 with his June 2017 pension payment. This one off payment has been calculated as (£148.44 – £47.89).

All of the figures and information provided is correct for the purposes of the question. It is not necessary for you to carry out any further calculations or check the numbers provided in the question. There is no need to consider any additional statutory or legal requirements that may apply.

END OF PAPER