

# Subject CM1

## Corrections to 2022 study material

### 1 Comment

This document contains details of any errors and ambiguities in the Subject CM1 study materials for the 2022 exams that have been brought to our attention. We will incorporate these changes in the study material each year. We are always happy to receive feedback from students, particularly details concerning any errors, contradictions or unclear statements in the courses. If you have any such comments on this course please email them to [CM1@bpp.com](mailto:CM1@bpp.com).

This document was last updated on **13 April 2022**.

## 2 Paper A Course Notes

### Chapter 24

Correction added on **20 February 2022**

Page 25

The section at the top of the page should read:

We define the number of lives removed over the year of age due to decrement  $k$  as  $(ad)_x^k$ .  
Hence we have:

$$(aq)_x^k = \frac{(ad)_x^k}{(al)_x}$$

$${}_n(aq)_x^k = \frac{(ad)_x^k + (ad)_{x+1}^k + \dots + (ad)_{x+n-1}^k}{(al)_x}$$

$$(ap)_x = \frac{(al)_{x+1}}{(al)_x}$$

$${}_n(ap)_x = \frac{(al)_{x+n}}{(al)_x}$$

for  $n = 0, 1, \dots$

### 3 Revision Notes

#### Booklet 12

Correction added on **13 April 2022**

#### Page 47

The table of survival probabilities contains a typo. The year 2 1-year probability should be 0.925723 as per the calculations shown beneath this table in the revision booklet. Hence, the table should read:

<i>Year</i>	<i>Age</i>	<i>1-year probability</i>	<i>Probability of initial policy being in force at start of year</i>
1	30	0.877082	1
2	31	0.925723	0.877082
3	32	0.950038	0.811935
4	33		0.771369

## 4 Mock Paper B

### Question 2

Correction added on 16 March 2022

Some of the question parts referenced from part (v) onwards are incorrect. The corrected question parts are below.

- (v) Repeat part (iv) for a policy with a 5% maturity bonus. [4]
- (vi) Repeat part (iv) for a policy with no maturity bonus. [4]
- (vii) Comment on, and briefly explain, the results you have obtained in (iv), (v) and (vi). [4]

The insurance company now wishes to analyse the sensitivity of the results obtained to changes in the unit fund growth rate assumption in the basis.

Consider a policy with a maturity bonus of 3% and the allocation rate calculated in part (iv)(a).

- (viii) Complete the table provided in the 'Q2 (viii)' sheet to show the percentage change in the net present value and projected maturity value of the policy as a result of:
  - (a) increasing the unit growth rate assumption to 5% *pa*
  - (b) decreasing the unit growth rate assumption to 2% *pa*compared to the original basis. [4]
- (ix) Discuss briefly the implications of your results in (viii) for the insurance company and policyholder. [4]

[Total 65]

**END OF MOCK EXAM**