

Subject CM1

Corrections to 2020 study material

1 Comment

This document contains details of any errors and ambiguities in the Subject CM1 study materials for the 2020 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.

This document was last updated on **10 September 2020**.

2 Paper A Course Notes

Chapter 3

Correction added on 1 June 2020

Page 19

The fifth paragraph on this page should refer to the effective rate of discount, not the effective rate of interest.

Chapter 6

Correction added on 19 November 2019

Page 13

The solution to part (ii) of the question on this page should refer to the value of the rental payments on 1 January 2018, not 1 January 2023.

Chapter 7

Correction added on 11 November 2019

Page 14

About halfway down the page, the $s_{\overline{n}|}^{(p)}$ term on the left hand side of the expression just after the words “Again, using the formula for $s_{\overline{n}|}$ gives:” should have double dots over it, *ie*:

$$\ddot{s}_{\overline{n}|}^{(p)} = \frac{(1+i)^n - 1}{d^{(p)}}$$

Chapter 8

Correction added on 19 December 2019

Page 7

The y-axes of the graphs at the bottom of this page should be labelled “Rate of payment” rather than “Amount”.

Chapter 18

Correction added on 2 July 2020

Page 10

In the solution on this page, the first line of calculations after the word 'So:' should read as follows:

$$(\bar{IA})_{50:\overline{10}|} \approx (1+i)^{\frac{1}{2}} (IA)_{50:\overline{10}|}^1 + 10A_{50:\overline{10}|}^1$$

ie there should be no 'bar' on the increasing assurance after the \approx sign.

Chapter 27

Alert added on 7 September 2020

Page 40

The question on this page requires the calculation of net premium reserves for a with-profits policy. This type of calculation is not on the CM1 syllabus, however, students should be able to calculate the required reserves with the following additional information:

- Net premiums do not include bonuses or expenses.
- Net premium reserves only account for bonuses that have already been declared. Any future bonuses that have not yet been declared are excluded from the reserve calculation.

3 Assignment X solutions

Solution X2.3

Correction added on 6 February 2020

The course reference box should say "*Optional redemption dates are covered in Chapter 12, Section 1.5*" rather than Section 1.7.

Solution X3.5

Correction added on 2 July 2020

In the first line of the solution, the age on the deferred annuity should be 40 select:

$$\text{EPV annuity benefit} = 15,000 {}_{25|}\bar{a}_{[40]} = 15,000 \frac{D_{65}}{D_{[40]}} \bar{a}_{65}$$

4 Revision notes

Booklet 6

Correction added on 7 September 2020

The solution to part (i) of Question 10 in this booklet (Subject CT1 April 2011 Question 8) refers to a fund's liabilities being due in three years' time and twenty years' time. This should be three years' time and **six** years' time.

Booklet 12

Correction added on 7 September 2020

The solution to Question 5 in this booklet (Subject CT5 September 2012 Question 14) shows a table containing components of a policy's profit vector. The death/survival cost for year 4 of this policy should be £60,001 rather than £60,000 (both values are given to the nearest pound). This is due to the death benefit being paid immediately on death rather than at the end of the year, *ie*:

$$60,000(aq)_{[30]+3}^d \times (1.03)^{\frac{1}{2}} + 60,000(ap)_{33} = 60,000.57$$

This means the profit vector for year 4 should be -£46,302 and the final NPV of the policy is £886.59. The profit margin is still 1.96% to two decimal places.

5 Mock 1

Question 15

Correction added on 7 September 2020

The bond in this question pays coupons of 3% annually in arrears, but part (ii) of this question incorrectly refers to coupons of 6% rather than 3%.

6 Mock 2

Question 16

Correction added on 10 September 2020

There is an issue with the life table in this question in that the value of $d_{42} = 8$ is inconsistent with the values of $l_{42} = 487$ and $l_{43} = 478$. The difference between these two values should result in $d_{42} = 9$. As a result of this inconsistency, the premium calculated using the l_x values alone is £1,846 rather than the £1,732 given in the question. The premium of £1,732 is calculated using a combination of d_x and l_x values from the life table.

7 Mock 3

Question 1

Correction added on 10 September 2020

The basis to use for this question has been omitted. This should be PFA92C20.