INSTITUTE AND FACULTY OF ACTUARIES

EXAMINERS' REPORT

April 2021

Subject SP1 - Health and Care Specialist Principles

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 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.

Paul Nicholas
Chair of the Board of Examiners
July 2021

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

1. The aim of the Health and Care Specialist Principles subject is to instil in successful candidates the ability to apply, in simple situations, the principles of actuarial planning and control needed in health and care matters on sound financial lines.

2. Candidates who approach the questions, especially the more substantial elements of each question, in a methodical and detailed manner are far more likely to satisfy the examiners and receive a pass in the subject. Candidates will gain few marks if they do not address the question asked but merely write around the topic of the question.

3. The mark allocation for each question part gives an indication of the relative length of answer or number of points to be made to gain full marks. The Examiners' Report covers more points than would be expected to get full marks. This is so that alternative approaches to questions by different candidates can be accommodated.

4. It is often helpful to structure and use subheadings when answering long part questions.

B. Comments on *candidates' performance in this diet of the examination.*

1. The paper was a relatively straightforward one and well-prepared candidates scored well across most of the questions.

2. Questions that focussed on knowledge of the Core Reading were well answered by those who had prepared thoroughly. However, the paper included several part questions requiring wider thinking or application of core reading to specific circumstances, such as questions 3(i), 3(ii), 3(iv), 4, 5(ii) and 6(ii). Candidates should recognise that these are generally the questions which differentiate those candidates with a good grasp and understanding of the subject.

3. It is pleasing to see many candidates providing their answers under subheadings, making them easier to follow and mark. This also helps show that they have applied their knowledge to the specific scenarios described.

4. The comments that follow the questions concentrate on areas where the candidates could have improved their performance. Candidates approaching the subject for the first time are advised to include these areas in their revision.

C. Pass Mark

The pass mark for this exam was 63.
286 candidates presented themselves and 153 passed.

Solutions for Subject SP1 - April 2021

Q1

(i)

Model points selection

A number of model points will be chosen to represent the expected new business under the product [½]

As this is an existing product, the profile of the existing business, modified to allow for any expected changes in future, can be used to obtain the model points [½]

If there is any changes to the product design, the profile of any similar existing product combined with advice from the company's marketing department would be used [½]

Assumptions setting

Experience investigation period should be long enough to include sufficient data to ensure credibility [½]

but recent enough to ensure that the experience remains relevant [½]

Lapses / Persistency [½]

Use company's own experience [½]

Allow for any known trends that may affect future lapse experience [½]

Make suitable allowance for any difference in experience between different distribution channels [½]

Morbidity [½]

These assumptions may come from a standard table (with suitable adjustment) [½]

or may be calculated straight from the insurer's experience [½]

either is possible as the company has sold the product for many years [½]

Allow for reinsurer's rates where appropriate [½]

Make suitable allowance for the probability of surviving the survival period [½]

Allow for medical advancements [½]

Allow for change in underwriting conditions [½]

Allow for change in claims management process [½]

Allow for changes in policy terms and conditions [½]

Allow for changes in target market [½]

Mortality [½]

Standard tables might be used here [½]

or may be based on company's own experience [½]

Pre-claim mortality is needed for survivorship factor (as this reduces the probability of claim) [½]

Post-claim mortality is needed [½]

and this rate should be on an impaired basis [½]

and it should allow for later worsening of health due to subsequent diagnoses. [½]

Expenses [½]

Based on company's own expense analysis. [½]

Initial expense will need to factor in development / pricing costs appropriately [½]

Allow appropriately for expense inflation [½]

Factor into any Third Party Arrangements / Outsourcing Arrangements [½]

Commission [½]
This will be based on the agreed commission arrangement / structure with distribution channels [½]
Any commission clawback arrangement should be allowed for [½]

Reserving basis [½]
Allow appropriately for the statutory reserving requirements [½]

Capital requirement [½]
Allow appropriately for the statutory capital requirements in addition to the statutory reserves [½]
Cost of capital allowance should be in line with statutory requirement [½]
or company's own internal capital requirement with a capital buffer in line with its internal capital management policy [½]

Investment returns [½]
Allow appropriately for investment returns expected to be earned on reserves [½]
This will depend on the assets assumed to be invested for backing the reserves [½]
Risk Discount Rate (RDR) [½]
RDR should be set based on the company's risk appetite [½]
and the level of statistical risk attaching to the cashflows under the particular contract, i.e. their variation about the mean as represented by the cashflows themselves [½]
and the company's target profit margin [½]
Allow appropriately for any reinsurance arrangements [½]
All the financial assumptions should be consistent with each other [½]

<u>Cashflow projections</u>
For each model point, cashflows will be projected forward [½]
Typical items of cashflow will include:

- Premiums
- Expenses (initial, renewal, claim)
- Commission (initial, renewal)
- Commission claw-back
- Claims
- Contribution to reserves
- Contribution to capital requirements
- Interest on cashflows and reserves / Investment return
- Tax

[*½ mark for each cashflow item*]

Claims would be calculated as "Incidence Rates x (50% of Sum Assumed + 10% of Sum Assured x Annuity Factor)" [1]
The net projected cashflows will project to the end of policy term [½]
then be discounted at the Risk Discount Rate [½]
The premiums for the model point can then be set so as to produce the profit required by the company [½]
It may be acceptable for the desired level of profitability to be reached in aggregate (scaled up for the expected new business mix and volume) [½]

without requiring every single model point to be profitable in its own right. i.e. cross-subsidy between model points [½]
However, if certain model points are unprofitable, the aggregate profitability of the business is then exposed to changes in mix (as well as volume) of the contracts sold [½]
Once acceptable premiums have been determined for the model points, premiums for all contract variations can be determined [½]
The net cashflows in respect of the model points, appropriately scaled up for the expected new business mix and volume under the product, will be incorporated into a model of the business of the whole company [1]
In addition to Present Value of Future Profit (PVFP), the company may consider other profit criteria such as: Internal Rate of Return, Return on Capital and Payback Period [½]
[*½ mark for any two additional profit criteria*]

Perform further sensitivity analysis of profits to a change in the key assumptions [½]

<u>Marketability / Competitiveness of the premium rates</u>
The premiums produced need to be considered for marketability [½]
This may need to be assessed for key ages/gender/distribution channel etc. against competitors rates to ensure competitiveness of rates [½]
This might lead to a reconsideration of the design of the product [½]
e.g. either to remove features that increase the riskiness of the net cashflows [½]
or to include features that will differentiate the product from those of competing companies [½]
Consider whether rates need to differ by distribution channel [½]
[Marks available 39½, maximum 11]

(ii)
<u>Reduce the profit criteria</u> [½]
The product may be sold as a loss leader [½]

<u>Review pricing assumptions</u> [½]
Reduce margins in pricing basis [½]
Increase future investment returns through more aggressive investment approach [½]
although this may not have a significant impact on pricing if reserving requirements are relatively low for some business [½]

<u>Review the benefit design</u> [½]
Expand the benefits limitations [½]
Increase the number of exclusions [½]
Introduce reviewable premiums [½]
Change the definitions of benefit conditions covered, for example [½]
making the critical illness definition more severe (to reduce the number of claims) [½]
and making the definition clearer (to reduce claims disputes) [½]
Reduce the number of illnesses to be covered [½]
Reduce the lump sum benefit [½]
and increase the length of survival period [½]
Offer other benefits which diversify the morbidity risks [½]
Remove any surrender benefits [½]
Introduce unit-linked product features [½]

Review policy wording [½]
Tighten up policy wording to reduce risk of unexpected claims [½]

Review sales channel involved for this product [½]
As it affects pricing assumptions e.g. lapses, target group, claims experience varies by sales channel type [½]
Target sales channels with better lapse and claims experience. For example [½]
target larger policies or certain socio-economic groups / geographical areas [½]
Could increase marketing / improve customer services standard to reduce lapses [½]

Review commission structure [½]
Reduce commission rates [½]
Use regular commission structure instead of initial commission [½]
i.e. delay the full payment of commission [½]
Increase the time period for commission clawback [½]

Consider the Underwriting approach at New Business (NB) stage [½]
Review of effectiveness of medical underwriting process at NB stage [½]
Cost benefit analysis of underwriting process [½]

Review the Claims management process [½]
Ensure that the claims accepted are consistent with the pricing assumptions [½]
Cost benefit analysis of claims management process [½]

Options and guarantees [½]
Review the pricing approach / assumptions [½]
Consider the removal of any costly or onerous options and guarantees [½]

Review expense base [½]
Outsourcing / Use of third party specialists e.g. sales channels, underwriting, claims management etc [½]
External providers may provide a level of expertise and efficiency at a cheaper price [½]
Improve internal operational efficiency to reduce overhead costs [½]
Spread development / initial / project costs over a longer time horizon [½]

Review reinsurance arrangement [½]
To ensure that the most efficient level of capital requirement is achieved [½]
which is a balance between insurance risk capital requirement and counterparty default risk capital requirement [½]
Perform a cost benefit analysis of reinsurance arrangements [½]
which is a balance between insurance risk mitigation and passing profits over to reinsurers. [½]
Consider profit sharing arrangement with reinsurer [½]
Consider deposit back arrangement or other similar arrangement to reduce reinsurance default risk [½]

Review reserve requirements [½]
Consider removing unnecessary margins in the reserving basis. [½]

Review Capital requirements [½]
Reduce capital requirements through risk mitigation exercise, such as [½]
risk diversification through entity structure [½]
diversification through product types [½]
revised risk appetite [½]
de-risking through selling off or terminating loss making business [½]
[Marks available 30, maximum 8]

(iii)
Review the marketing team's premium and product comparison to ensure that the comparison is performed on a like-for-like basis [½]
Offer incentives to policyholders such as free gifts to increase new business volumes and so increase contribution to overheads [½]
Automation of processes to enhance customer's experience / satisfaction, for example [½]
automated / simplified underwriting process [½]
automated / simplified claims management process [½]
Target sales channels with better lapse experience [½]
Target sales channels with better claims experience [½]
Offer incentives to distribution channels to increase new business volumes [½]
Develop Strategic deals with large distributors [½]
Try to build up relationships with distributors who currently do not give insurer any business [½]
Managing distribution process to align with product pricing assumptions [½]
Review/introduce commission claw back [½]
Sales messages, e.g. highlight other services provided in marketing literature [½]
Provide/improve sales training / improve quality of sales staff [½]
Provide better customer services [½]
Try to cross-sell (assuming the insurer also sells other products) [½]
or try to increase sales by selling policies to existing customers' family members / friends, [½]
which may be done using reward schemes / discounts to the existing customers starting to offer group business [½]
Increase marketing of the company [½]
and/or the product. For example [½]
Advertising / Marketing campaign on TV, newspapers, magazines, internet, social media etc [½]
[½ mark for any two examples]

Unique Selling Point (USP) / Review of benefit design to differentiate the company's product from its competitors, or make it more attractive, for example [½]
making it simpler (so more appealing) [½]
making it more comprehensive / innovative [½]
covering more illnesses, children's benefits, terminal illness benefits, additional options [½]
but without increasing premiums significantly [½]
adding flexibility by giving the customer a choice of the proportion as a lump sum vs income [½]
and/or the length of the income period [½]

not ceasing the annuity benefit on death [½]

[Marks available 30, maximum 8]

[Total 23]

In general, most candidates scored reasonably well on all three parts of this question.

Part (i) which is a relatively standard pricing question was well answered by most candidates. The better candidates were able to recognise the need to describe the broader pricing process rather than focussing on a detailed explanation of theoretical premium calculation with formulae.

Part (ii) was generally well answered. The better candidates were able to provide reasonable suggestions and flesh out or build on their suggestions. For example, instead of simply stating "reduce expenses" the better candidates would elaborate on how expenses could be reduced such as "consider outsourcing if it is more cost effective"; "improve internal operational efficiencies" etc to gain further marks.

Part (iii) was generally well answered. The better candidates were able to think widely about marketing and provide sensible examples.

Q2

(i)

Reasons for reinsurance:

This is a new product so it will not be covered under existing reinsurance treaties [½]
This may be the first time that the insurer is exposed to the group insurance market [½]
and/or PMI business [½]
As such, it may lack the experience of writing the business [½]
and may require significant external technical support, which could include [½]
Availability of expertise on pricing, e.g. [½]
underwriting support for hazardous occupational classes [½]
setting rating factors for different occupational classes [½]
setting free cover limits for different group size & profile [½]
renewal process set up for group business [½]
setting credibility factors based on group size to determine renewal premiums [½]
setting criteria for maximum cover allowed [½]
expertise on product design, and [½]
expertise on claims management system development [½]
Limiting exposure to risk / Provide protection against accumulation of risk, for example [½]
exposure to particular groups / industries, or [½]
exposure to medical cost inflation [½]
Increasing capacity to write new business such as large risks (i.e. single risks) [½]
and also increasing capacity to write more risks (i.e. cumulatively), which is particularly relevant for a new product [½]
Smoothing results [½]
which is particularly important for a small insurer [½]
Financial assistance [½]
this may be particularly important for a small insurer and/or a new product [½]

and such assistance could be used to help with new business strain [½]
Allow greater volumes of new business to be written by the insurer than would be possible using only its own capital [½]
Allow greater diversification of the company's business by writing more new business than would be possible if there was no reinsurance available [½]
Reducing solvency capital requirement [½]
Financial or tax arbitrage [½]
It could be a statutory requirement [½]
Take advantage of good reinsurance rates in the market / reinsurance is good value [½]

[Marks available 15, maximum 6]

(ii)
Reinsurance quote may include:
Scope of treaty
Type of treaty i.e. obligatory or facultative [½]
Type of reinsurance (quota share, excess of loss, etc.) [½]
Retention details, including [½]
Percentage retained, but unlikely if the PMI cover is on an indemnity basis [½]
Retention level (either surplus or excess of loss) [½]
Upper limit of reinsurance cover [½]

Benefit features of the product to be reinsured
Compulsory or voluntary membership [½]
Include all the benefit features of the scheme in detail [½]
Waiting period, if any [½]
Hospitalisation conditions including minimum duration of hospitalization for eligibility of claims [½]
Maximum ceiling / Upper limit on product benefits [½]
Type of treatment covered like allopath, homeopath etc [½]
Private ambulance benefit, if any [½]
Maximum lifetime ceiling / upper limit on individual cover, if any [½]
Cashless or reimbursement type benefits [½]
Minimum / maximum entry age [½]
Maximum cover ceasing age [½]
Exclusions like HIV, pre-existing conditions, if any [½]
Deductibles, if any [½]
Cover for spouse / dependents, if any [½]

Underwriting terms and conditions
Underwriting details and conditions [½]
Auto acceptance limits for the maximum cover/ risk by the insurer [½]

Claims management
Claims settlement procedure. e.g. [½]
auto limits for claims settlements for the insurer [½]

Reinsurance Premium Rates
Reinsurance premium basis (original terms / risk premium) [½]
Reinsurance premiums guaranteed or reviewable [½]

and any reinsurance premium guarantees on future reinsurance cover offered [½]
Rating factors [½]
Rates for sub-standard lives [½]
Profile of the lives/group to be covered [½]
Reinsurance premium payment frequency [½]
Profit sharing arrangement, if any [½]

Other reinsurance terms and conditions
Credit rating of the reinsurer [½]
Scheme renewal details including other terms and conditions [½]
Reinsurance commission payable [½]
Deposit Back - Terms and conditions on funds that will be deposited back [½]
Any additional services that will be offered (e.g. access to data / expertise) [½]
Any financial reinsurance information (commission payment and payback terms) [½]
Period of time for which quotation is valid [½]
Any options available of the cover (e.g. different quotations based on different levels of reinsurance cover, exclusions, etc.) [½]
Rights and obligations of the cedant/insurer and reinsurer [½]
Terms and conditions for cancellation of treaty by each side [½]
Any limitation on volumes of business expected [½]

[Marks available 15, maximum 10]

[Total 16]

Part (i) is a straightforward reinsurance question and most candidates scored highly on this question.

Part (ii) was reasonably well answered by most candidates. The better candidates were able to identify that the information required to be included in the quotations are those that will help the potential cedant to make a commercial decision on its reinsurance arrangements.

Q3

(i)

Coverage

Creditor Insurance

Covers outstanding loans in case of death, accident, sickness and unemployment [½]

Income Protection

Covers loss of income due to sickness and accident [½]
No death benefits [½]
No unemployment benefits [½]

Term

Creditor Insurance

Short term policies (e.g. up to 2 years) [½]

Income Protection
Long term policy, up to retirement age or fixed age [½]

Deferred Period
Creditor Insurance
Short deferred periods (e.g. 1 month) [½]

Income Protection
Deferred period is generally longer than creditor (e.g. 6 months) [½]

Benefits
Creditor Insurance
Benefits usually linked to regular payments under loans [½]
Income paid for a short-term (e.g. 1 year or 2 years) [½]
Benefits are usually fixed to the extent of loan amount or regular loan repayment amounts [½]
Benefits are generally paid to the lender directly [½]
and hence the benefit must be used to meet loan repayments [½]

Income Protection
Benefits are much higher, typically up to 70% (or any other sensible percentage) of income [½]
and not necessarily linked to loans, typically linked to salary/ income level [½]
Income can be paid for much longer up to retirement or fixed age [½]
Benefits can be indexed to maintain real value [½]
Benefits are generally paid directly to the policyholder [½]
and the policyholder has the discretion on how to spend the benefit payments [½]
IP benefits might include additional features such as partial / proportionate benefits, rehabilitation benefits, linked-claims periods [½]
[*½ mark for any one example*]

IP claim definition could be occupational based. e.g. Own Occupation / Any Occupation [½]

Underwriting
Creditor Insurance
Usually minimal or no underwriting as the policy term is shorter [½]

Income Protection
Full underwriting is typically applied before the policy is issued [½]

Rating factors
Creditor Insurance
Typically a unit rate is used for premium calculations [½]
and hence it does not vary by age or other risk factors [½]

Income Protection
Typical rating factors may include age, occupational class, smoking status, benefit structure, rehabilitation benefits, own occupation/any occupation etc [1]
½ mark for two examples, 1 mark for four examples

Premiums

Creditor Insurance

Premiums are typically fixed, and [½]
yearly renewal [½]
Relatively low premiums in comparison with IP due to shorter term [½]
and creditor insurance will typically cover the (monthly) loan repayment (which is likely to be smaller) [½]

Income Protection

Premiums can be fixed or indexed [½]
Premiums can be guaranteed or reviewable at regular intervals [½]
Premiums can be expensive depending on cover, age, policy term etc [½]
IP policies are likely to be for larger amounts (buying a benefit of up to 70% of regular income, so IP policies are likely to have larger premiums (in absolute terms) [½]

[Marks available 17½, maximum 6]

(ii)

Coverage

Term Assurance

Death only [½]

Accelerated Critical Illness

Payment on death or critical illness whichever is earlier [½]
There could be a predefined list of illnesses and conditions under cover [½]

Term

Term Assurance

Term of policy is fixed [½]
which could range from less than 5 years to over 25 years or more [½]

Accelerated Critical Illness

Similar to term assurance [½]

Benefits

Term Assurance

Sum assured is normally fixed [½]
There could be a terminal illness clause [½]
where if death is expected to be imminent (e.g. within 3 months), the policy pays out the benefits early [½]
Benefits are generally used for loan / mortgage repayments and providing financial support to spouse / dependents [½]

Accelerated Critical Illness

Sum assured is normally fixed [½]
but there could be tiered benefits depending on the severity of the illness [½]
It can include an option to reinstate death cover after diagnosis of CIs. [½]
Death benefits are for similar use under Term Assurance [½]
but CI benefits could also use for maintaining lifestyle / medical care following the diagnosis of CI. [½]

Underwriting
Term Assurance
Full underwriting is typically applied before the policy is issued [½]

Accelerated Critical Illness
Full underwriting is typically applied before the policy is issued [½]
but underwriting may be more onerous than term assurance [½]

Rating factors
Term Assurance
Typical rating factors may include age, occupational class, smoking status, benefit amount, geographical location [½]
[*½ mark for two examples, 1 mark for four examples*]

Accelerated Critical Illness
Similar to Term Assurance [½]

Premiums
Term Assurance
Policies are generally on guaranteed terms [½]

Accelerated Critical Illness
Policies can be either on guaranteed or reviewable terms [½]
due to the higher volatility of morbidity experience [½]
ACI policies provide more cover, so are likely to have larger premiums (relatively / per unit of sum assured). [½]

Claims management
Term Assurance
Generally more straight forward than ACI [½]
Complications could arise due to non-disclosure of medical conditions or dangerous pastimes etc [½]

Accelerated Critical Illness
ACI claims management will be more complex [½]
potentially involved medical assessments vs obtaining a death certificate [½]

and ACI is more likely to have an assessment period (within which claims will be assessed). [½]

[Marks available 14½, maximum 5]

(iii)
Simplifying the underwriting form/process may be the emerging market practice [½]
the insurer may simply be bringing its practice in line with competition [½]
On the other hand, the insurer may try to differentiate itself from the rest of the market as a strategy to increase its new business sales [½]
Removal of certain questions / careful redesign may mean that experience is not affected [½]
It is unclear whether follow up questions / further information request is allowed should the questions in the simplified for identify potential areas of concern [½]

If further underwriting questions / information requests are allowed, the insurer may still be able to identify higher risk individuals / substandard lives [½]
Faster processing of policies as less underwriting [½]
which would lead to lower underwriting costs [½]
Less questions could encourage more proposals [½]
which could result in increased sales [½]
Increase in new business volume could help reduce maintenance costs per policy [½]
Higher sales could increase capital strains / New Business Strain [½]
It could also lead to greater strain on administration systems [½]
Upfront development costs will be incurred for the redesign of underwriting process [½]
and any required changes to claims process [½]
Lapse and re-entry risk from cases that have been underwritten with extra loadings or exclusions applied [½]
The simplified form could lead to increased selection against insurer [½]
Simpler forms may make non-disclosure more likely [½]
More substandard risks may be accepted at standard terms [½]
Morbidity experience could worsen over time as a result [½]
and may lead to losses for insurer if premiums are guaranteed [½]
The changes in underwriting practice is likely to trigger new negotiation with reinsurer which may result in higher reinsurance premium rates [½]
The changes in underwriting practice could lead to changes in experience [½]
such as claims, expenses, persistency, business volumes, business mix [½]
[*½ mark for any two examples*]

Simplified form may not capture adequate information to assess risks accurately [½]
so could potentially lead to incorrect premiums being charged [½]
or rejecting policies that could have been accepted with exclusions/rating [½]
If premiums are reviewable, any upward revision in premium rates may lead to selective lapses [½]
If premiums are guaranteed then the loss making portfolio may lead to solvency issues [½]
The increased morbidity risk due to selection and reinsurance rates may outweigh the benefit of expense savings [½]
Insurer will need to train underwriters, sales staff & admin staff about new simplified processes [½]
Appropriate changes required to policyholder documentation, sales literature etc [½]
Could ultimately lead to a significant increase in claim numbers, which could adversely impact claim management process [½]
This could adversely impact company's reputation / service standards between insurer and the bank [½]
Increased risk may necessitate greater margins (in pricing, reserving, etc.) [½]
[Marks available 17½, maximum 4]

(iv)
<u>Applicable to both the insurer and the bank</u>
Poor selling practices if sales staff are not adequately trained for such complex products [½]
For Example, not considering whether the products meet the needs of potential policyholders [½]
which could lead to mis-selling of products [½]
Mis-selling could lead to intervention by the regulator [½]

and financial loss as a result of fine / penalty [½]
reputational damage [½]
lapses / surrenders of existing business [½]
reduction in new business sales [½]
The potential policyholders may already have an individual IP policy, or group IP cover by his/her employer [½]
There could be over insurance so that the sales staff can earn more commission [½]
or the benefit level does not provide the potential policyholders with adequate level of cover [½]
Sales staff may fail to explain all the key features of product [½]
Sales staff may provide misleading information to potential policyholders [½]
For example, not mentioning that the policy will not have a surrender value on termination [½]
or the length of waiting period, deferred period, cool-off period, premium escalation, pre-existing conditions etc [½]
[*½ mark for two examples, 1 mark for four examples*]

Critical illness conditions may not be properly explained by sales staff [½]
Sales literature may contain incorrect, misleading or ambiguous information [½]
Sales staff may apply undue pressure on potential policyholders to secure a sale [½]
Sales staff may target particular groups of vulnerable individuals who may not the ability to make the appropriate decision on their own need [½]
or whether the quotes represent value for money [½]
Sales staff may target those who are already sick but help the potential policyholders to lie on the application form to obtain a policy fraudulently [1]
Sales staff fail to explain that the reviewable premiums on critical illness policies may increase in the future [½]
Sales staff may mislead the potential policyholders that the cover provided by the products is a mandatory requirement [½]
Inflation risk / Value of cover eroded by inflation not explained [½]
Inconsistency of approach for existing / new customers may lead to customer dissatisfaction [½]
Potential Treating Customers Fairly (TCF) issues if the existing policyholders consider that the more stringent initial underwriting process in comparison with new policyholders was unfair to them [½]
Similarly, there could be TCF issues if new policyholders consider that the more stringent underwriting at the claims stage in comparison with existing policyholders is unfair to them [½]

<u>Specific to the insurer</u>
The insurer does not have direct control over the quality of the bank's sales staff [½]
The bank's sales staff may not target the policyholders / business mix intended by the insurer in its pricing [½]

<u>Specific to the bank</u>
High surrenders could lead to clawback of commission paid to bank adversely impacting its profits [½]
The bank does not have direct control over the quality of the insurer's products [½]
and its customer services standard [½]

Any reputational issues could affect the bank more severely if its name is used for fronting the product sales [½]

[Marks available 17, maximum 4]

[Total 19]

Part (i) and Part (ii) were not generally well answered by most candidates. In Part (i), many candidates did not fully understand Creditor Insurance and incorrectly assumed that the premiums for Creditor Insurance would be higher than Income Protection just because it covers a wider range of benefits. For both parts, the better candidates were able to differentiate the products in a structured way and stated the differences explicitly.

Part (iii) was reasonably well answered by most candidates.

Part (iv) was poorly answered by most candidates. Only the best candidates managed to flesh out sales specific risks in a structured way and provide relevant examples

Parts (i), (ii) and (iv) of this question differentiated the well prepared candidates from the weaker candidates

Q4

Claims experience and Pricing

This approach may lead to reduced claim costs [½]
as the pre-authorisation process could help to influence the policyholders' propensity to submit a claim [½]
It could therefore discourage unnecessary claims [½]
which in turn would reduce improper payments [½]
It could also enable the insurer to help manage care provision, e.g. [½]
by directing the policyholder to the most suitable treatment provider / hospitals with which it has pre-arranged favourable terms [½]
Consequently, it could lead to better claims experience [½]
As claims are already authorised, the claims payment process will be accelerated [½]
Thus helps improve efficiency of the claims management process [½]
Improvement in the claims management process efficiency would help reduce claims handling expenses [½]
Better experience and reduced claims handling expenses could be factored into pricing, which would lead to lower risk premiums [1]
Company may be able to negotiate better reinsurance terms due to the better claims management control [½]

Marketability

Lower premiums would improve competitiveness [½]
There would be much lower risk of declining claims after costs have already been incurred, this may be due to either [½]
the treatment not being covered [½]
the provider used not being covered [½]

Lower risk of declining claims could reduce disputes between the insurer and the policyholder [½]
and improve policyholders' satisfaction [½]
and could enhance the company's reputation [½]
and marketability of its products [½]

Development / Upfront setup
A new authorisation process will need to be set up, so additional resources will be required [½]
The company may not have existing expertise in house, and external help would be required [½]
Setting up the new process and employing additional resources will incur upfront costs [½]
The development costs will need to be recouped and factored appropriately in pricing [½]

Reserving and Capital requirements
The potential improvement in claims experience and settlement time could lead to lower level of reserving requirement [½]
It could also lead to lower risk capital requirement [½]

Existing policyholders
Need to consider whether this proposal is just for new business or will existing business also be impacted [½]
Potentially it would not be fair to introduce this process to existing policyholders [½]
as they will have purchased their policies where the terms and conditions are based on the old process [½]
This could lead to Treating Customers Fairly (TCF) issues [½]
Regulator may also not be happy if insurer arbitrarily applies new process to policyholders where it has not been fully explained [½]
The insurer would need a significant communication exercise to ensure existing policyholders were aware that processes had changed [½]
If the insurer uses the old process for old business and the new process for new business, it will need to manage two separate processes for existing and new policyholders [½]
adding further complexity to the claims management process [½]

Other considerations
The company will need to consider practical issues over the authorisation process [½]
in particular whether authorisation will be required on every medical payment / medical consultation and treatments [½]
A poorly designed process could lead to confusion and delay in authorising claims [½]
which could lead to Treating Customers Fairly (TCF) issues and complaints [½]
There might also be policyholder dissatisfaction if treatments / providers that are covered are deemed to restrict policyholder freedom [½]
The delays in treatment time which could have detrimental effects on urgent medical cases [1]
Any policyholders dissatisfaction could lead to bad publicity [½]
Which could cause reputational damage [½]
In some extreme cases, it could lead to intervention by the regulators [½]
The introduction of a new pre-authorisation process may not be popular with brokers / existing policyholders [½]

If most of the other competitors do not operate a pre-authorisation process, policyholders may choose to take out policies from its competitors if the process is being viewed as trying to make it more difficult for policyholders to make a claim [1]
Policyholders switching to the other competitors could have an adverse effect on the insurer's new business volumes / mix [½]
The company will need to consider whether it should carry on offering the no pre-authorisation option [½]
There could be potential difficulty in obtaining the necessary documentation from referring physicians to submit a prior authorisation request [½]

[Marks available 25½, maximum 10]

[Total 10]

This question was well answered by those candidates who showed good understanding of the differences between pre-authorisation and preferred provider arrangements. Those who were able to think logically through various aspects of the insurer's business that would be affected (sales, claims management, existing vs new business, pricing, reserving, etc.) scored highly on this question.

The weaker candidates tended to confuse pre-authorisation with a guarantee of claims payment (assuming that claims that were previously rejected would now be paid just because the insurer was notified ahead of treatment) and resulted in scoring badly on this question.

This question differentiated those candidates with a good grasp and understanding of the subject.

Q5

(i)

Competition

Consider whether competitors are already selling their products using mobile applications [½]
If there are already in the space, then it makes sense to catch up before mobile applications are associated with other providers other than the insurer [½]
If they are not in the space, the insurer can have first mover advantage and create a brand associated with the digital space [½]
Consider what other digital platforms competition are using. E.g. website, social media [½]
Consider the features on competition mobile app and decide on whether these are necessary to include [½]
or differentiate using other extra features [½]
Consider whether the app could help selling its insurance contacts overseas [½]
subject to any political / regulatory / taxation restrictions [½]

Market Survey

The insurer can carry out market survey to assess the expected level of demand for mobile applications in the target market [½]
Consider the features that customers expect to have in a mobile application [½]

Depending on the country, there may be need to consider whether the target has access to internet and mobile phones that are compatible with mobile applications [½]
Consider whether customers are confident to buy products online without advice from sales staff or brokers / agents of the company [½]
Consider whether customers are willing to provide personal information/ data online [½]
Consider whether the 'recent global trends' have been temporary or permanent [½]
e.g. if the decrease in sales through tied agents is due to no-one being allowed to go into banks due to a global pandemic, then this decrease might only be temporary [½]

Design
Consider how the insurer will design the mobile application [½]
for example, whether there are internal developers who can develop the application [½]
It may be necessary to outsource development of the application [½]
and/or the ongoing management (e.g. the management of technical issues) [½]
Consider what features are going to be put on the app in terms of functionality, look and appearance etc. [1]

The considerations on features may include:
What information is to be collected at onboarding [½]
and how is the information validated [½]
For example, national ID number is validated against national registry [½]
Consider whether the application could serve as an omni-channel where customers get integrated service and can start discussions with insurer from another channel and end up communicating through the application [1]
Digital signatures - how will customers sign off amendments, onboarding and other issues [½]
Proof of transaction, policy documents will be sent digitally and in encrypted formats [½]
Consider what security features will be embedded into the application [½]
Consider which amendments will be allowed using the application [½]
Consider the scope for fraud if the policyholders can change the beneficiaries and the level of cover [½]
Consider whether customers onboarded on other distribution channels will be allowed to utilise the mobile application [½]
The mobile application should ideally be able to integrate with the core insurance system that houses data and used for administration [½]
The mobile application may be expected to automatically generate reminders for payment and provide ability to proceed to make the payments [½]

Other Information Communication Technology issues
Consider how storage of data will be handled [½]
Storage issues will include
Keeping of records (policy, claims, premium payment) [½]
and history of policy amendments (e.g. adding of dependents) [½]
Additional storage may be required to be put in place [½]
Consider whether the storage is going to be in cloud or physical hardware and what are the possible costs of the options [½]
Consider any requirements from control functions such as risk management, audit and information security [½]
Consider how the company could mitigate various cyber risks [½]

Regulation
There may be need to get approval from the regulator to sell products via a mobile application [½]
Consider any relevant regulatory framework dealing with the use of technological platforms by insurers [½]
Consider any regulatory framework on the use of personal data [½]

Underwriting and Claims
Revision / simplification of underwriting approach to keep the underwriting as simple as possible [½]
For example, may decide to sell only low sum insureds online so as to remove need for underwriting [½]
Consider which underwriting documents can be uploaded with reasonable size online [½]
Claims notification process via mobile application will need to be defined [½]
Consider whether all required claim documents are compatible and able to be uploaded on the platform [½]
The lack of sales advice at the sales stage could lead to potential mis-selling / Treating Customers Fairly (TCF) issues [½]

Product design
Product designs will need to be kept simple, e.g. [½]
CI – limited illnesses, simple claims definitions, no options etc. [½]
IP – clear claim definition / rehabilitation benefits [½]
PMI – limited restrictions / exclusions [½]
The app is unlikely to be suitable for selling group business / it is more suitable for selling individual business [½]
However, if the members of group schemes can make use of the app to check / update their individual information, this could enhance the attractiveness of the insurer's group business. [½]
The app could also be used for cross-selling different products offered by the insurer [½]

Pricing
The mobile application may attract a different profile of customers [½]
There is need to consider whether data is available to set assumptions that are suitable to price the products that are going to be sold via the mobile applications [½]
The data is likely to be unavailable [½]
and hence may need to get the data from reinsurers and consulting actuaries [½]
Consider the extent of differences, if any, between the pricing / premiums of other distribution channels compared to pricing of products sold on the mobile application [½]
Consider higher level of margins in pricing assumptions as this is a new distribution channel with little / no data on underlying experience [½]
If mobile application products are significantly cheaper, agents and brokers may feel that they are being pushed out of ability to sell the products [½]

Claims process and experience
Claim submissions on the app: greater ease of claiming could increase claim propensities [½]
Claim submissions on the app: it would not be possible to submit vast quantities of evidence, so less detailed claims underwriting may be carried out [½]

There may be increased anti-selection [½]
as a result of both simpler underwriting and moving from individual sales through tied agents to more direct methods [½]

Volumes and mix of business
Quotations & policy purchases on the app: there may be an increase in sales [½]
particularly of smaller policies (so there may be a high volume of small-size policies) [½]
and of a younger demographic [½]
and lower net worth [½]
Use of the app might adversely affect sales through tied agents [½]
and may lead to damaged relationships with tied agents [½]
If the proposition is more successful than planned, this could cause significant new business strain (NBS) due to higher than expected increase in business volumes [½]
The insurer may want to control the new business volumes through an initial soft launch, [½]
or alleviate new business strain through reinsurance [½]

Expenses
Costs of developing the mobile application need to be considered [½]
The costs associated with performing the work in-house include setting up and training a new team [½]
The development costs could be particularly high as the app needs to cater for a range of devices (smart phones, tablets and watches) and a range of makes/models [½]
it could particularly be a major issue for a small insurer [½]
Outsourcing may reduce the risk of unexpected costs in the short-run [½]
but if the insurer becomes dependent on the outsourcer, then it has less control over future costs [½]
Commission may be lower (there may be none though app sales) [½]
Ongoing expenses (underwriting, claims management, general admin) may be lower [½]
There will be additional ongoing expenses of maintaining and managing the app [½]

Lapses / Persistency
If it is possible to amend the termination date, policies may be made shorter, and so finish sooner than originally expected [½]
which could reduce the expected profits originally priced into the contracts [½]

Data Management & Protection
Insurer will need to consider what data it is allowed to accumulate and store mobile devices [½]
Insurer will need to consider how long data can be stored for, before it needs to be deleted [½]
Insurer will need to consider who can access sensitive data and who cannot – it may need to manage multiple levels of access to policyholder data [½]
Insurer will need to consider security requirements to ensure it cannot be accessed by unauthorised personnel [½]
Insurer will need to consider the reputational issues if things are to go wrong [½]
particularly if sensitive policyholder data is leaked [½]
Insurer will need to consider what monitoring processes should be put in place to ensure processes are working as expected [½]
Insurer will need to consider how any breaches in data could be identified and remedied [½]

Insurer will need to consider what management information it should have in place [½]
Insurer will need to consider how system inter links with its other systems to ensure the information provided is up to date. These would include [½]
its back office admin system [½]
its premium rating system to ensure that premium rates quoted are up to date [½]
Insurer will potentially need to discuss proposal with a range of external stakeholders, for example [½]
Prudential regulator / Data Protection regulator (if different to Prudential regulator) [½]

Impact on the insurer's balance sheet and solvency
The company may need to consider any potential implications of launching the app on its balance sheet and solvency position, for example: [½]
any requirements to hold additional reserves due to uncertainty [½]
any implications on additional risk capital requirements due to uncertainty [½]
the implications of New Business Strain (NBS) on free assets (and hence solvency) [½]
and also ability to write other new business [½]
Adverse policy mix could impact on reserving requirements/ free assets (due to adverse claims) regardless of volume impact [½]

Other aspects
The company may need to appoint a project manager to ensure that the project will be delivered on time, within cost and according to specifications [½]
It may need to put in place a multi-disciplinary team to work and collaborate to develop and implement the mobile application [½]
A clear roadmap needs to be put in place for the project including the milestones that will need to be achieved in the process to launching the application [½]
Training of staff on how to deliver customer service, administrative efficiency to digital customers [½]
Training will also help change culture and make employees embrace digital transformation [½]
Engage distributors (agents and brokers) for them to understand that they will continue to do their work and be compensated accordingly [½]
Creative content will need to be put in place on how the mobile application will be advertised and through which marketing platforms [½]
There may be reinsurance implications of selling / administering business in this way [½]
By linking the policy to other apps, it might be possible to influence policyholders / manage risks [½]
e.g. incentives to behave in certain ways by linking to fitness related apps [½]

[Marks available 59, maximum 15]

(ii)
Customers may not be able to answer all underwriting questions without guidance from an expert like a sales agent [½]
Mobile application may have restrictions on the number and depth of questions the underwriter can reasonably ask an applicant [½]
However, speed is also an important factor as policyholder would generally expect quotes to be generated reasonably quickly [½]
as would decisions of providing cover / terms offered [½]

Products may be complex such that it is very difficult to simplify underwriting and make them compatible with the mobile application [½]
There may be increased levels of non-disclosure on the mobile application compared to other distribution channels [½]
which could be a deliberate fraudulent act committed by the policyholder [½]
or caused by the limitation / inadequate design of the app to capture all key information [½]
The chief underwriter may therefore be worried that cases of claims disputes may increase in the future [½]
If other insurers are using stricter underwriting, the insurer may be a target of anti-selection leading to poor claims experience [½]
Product specifications may need to be adjusted to be suitable for digital insurance, for example [½]
Reduce maximum sum insured without underwriting [½]
Require uploading of medical evidence on the application [½]
or include moratorium underwriting [½]
as higher forms of underwriting are not really compatible with this form of distribution [½]
Without these in place, the chief underwriter will be concerned that underwriting is still inadequate to be in line with pricing assumptions [½]
The chief underwriter may be concerned that the team may not have been adequately trained or skilled to be able to manage digital underwriting [½]
It may also be the case of change management, where the Chief Underwriter is yet to embrace digital transformation in financial services [½]
For example, the underwriter might be worried that digitalisation will reduce manual intervention in the underwriting process [½]
Other insurers who sell insurance digitally have been experiencing high claims experience [½]
The underwriter might be also concerned that they are not being adequately consulted on their requirements and expectations about the mobile application [½]
The underwriter might be concerned that such an app may cause issues with its reinsurers [½]
The chief underwriter may be concerned that underwriting will ultimately end up being automated and insurer will not need as many underwriters in the future / and his/her staff will be made redundant [½]
For CI, it might be hard to obtain proof of medical history (own or family) [½]
or information on the illness type / severity in sufficient detail [½]
For IP, it might be hard to obtain sufficient details on occupation [½]
For PMI, it might be hard to obtain sufficient information to determine pre-existing conditions [½]
For sub-standard risks, it might be hard to set terms for the level of information obtained via an app [½]
The chief underwriter may be concerned that the app is unable to perform financial underwriting adequately [½]

for example, the app's ability to check and detect the policyholder's other existing insurance contacts to mitigate the risk of over insurance [½]

[Marks available 15, maximum 5]

[Total 20]

Part (i) was generally well answered by most candidates. Candidates who structured the answer well and generated a broad range of ideas and made use of the specifics of the question such as mobile phone, data security etc scored highly on this question.

Part (ii) was poorly answered by most candidates, with the weaker candidates struggled to think about the wider aspects that the underwriter may be concerned about. A number of candidates also confused anti-selection with moral hazard and fraud.

Part (ii) of this question differentiated the stronger candidates from the weaker candidates.

Q6

(i)

Personal details

- Age / Date of Birth
- Gender
- Address
- Nationality
- Contact details including phone number & email address
- Occupation / Previous occupation if retired
- Income details / current salary or pension income
- Bank account details
- Marital status
- Height and weight
- Current medications
- Lifestyle considerations such as smoking and drinking
- Lifestyle considerations such as hobbies (this might include physical exercise – with the
- fitter individuals possibly being less likely to suffer mobility issues
- and mental stimulation – with the more mentally agile possibly being better able to fend off cognitive impairments)
- Spouse / dependents
- individuals with a spouse and/or dependents may be less likely to need care
- Personal medical history
- Pre-existing conditions
- Family history
- Existing LTCI policy details

- Other insurance policy details
- Criminal convictions

[*½ mark for each two items*]

Product details

- Name of the product / Unique Identification Number (UID)
- Policy term
- Premium payment term
- Premium frequency
- Reviewable or Guaranteed premiums
- Level or escalating benefits
- Nature of benefits – fixed amount or indemnity type
- Policy type – pre-funded or immediate need
- Optional benefits, such as
- Excesses / Benefit limits for indemnity products
- Deferred Period
- Tiers of nursing homes
- Home care / Assistive devices

[*½ mark for each two items*]

Declarations

Declaration of current health conditions [½]
Declaration of completeness and accuracy of information disclosed [½]
Standard declarations mandate by regulators [½]

[Marks available 19½, maximum 5]

(ii)

Suitability of moratorium underwriting

General

In place of formal medical underwriting at inception, it does not cover medical conditions that existed during a pre-specified period [½]
For pre-funded plan, Moratorium underwriting approach may ease underwriting process at proposal stage [½]
which could lead to simpler application process [½]
and faster application / risk acceptance process [½]
and better customer experience / satisfaction [½]
and in turn may boost new business sales [½]
and expense saving at new business stage [½]
and reduce new business per policy (fixed) costs [½]
Higher volume of new business may reduce per policy expenses due to spread of overhead expenses to more policies [½]
and increases profits [½]
For immediate need, the underwriting is a must at inception as it coincides with the date of the claims event [½]
If the disputes end up in Court, court cases may go in favour of customers [½]

which could lead to financial losses to insurer including legal expenses and court penalties [½]
and reputational damage to the insurer [½]
As a result, the actual claims may mismatch with the pricing assumptions [½]
It may be difficult to prove the fraud / non-disclosure after a long period at claims stage e.g. smoker status, medical history [½]
It is likely to be more difficult to prove knowledge at the time of policy application [½]
It is often a topic that attracts media attention if insurance claims are refused at a time of medical need especially for old age people [½]
It makes the assessment of appropriate premiums more problematic going forward [½]
Capital requirements may be significant for LTCI depending on the level of guarantee given in the product [½]
A moratorium approach may be more appropriate if this is the standard market practice for LTCI products [½]
and the insurer has experience of using it with its PMI product [½]
Reinsurers may have a view / preference / requirement on the suitability of the underwriting approach used [½]
There may be regulations that make moratorium underwriting problematic [½]
e.g. insurers may not be permitted to use information from more than x years ago [½]

<u>PMI vs LTCI specific</u>
Need to consider what the different features between these two products and how might they affect the use of a moratorium approach [½]
PMI is short-term, so it may not be too long a period between the initial underwriting and the claims underwriting [½]
for LTCI – particularly pre-funded LTCI taken out by younger individuals there may be decades between the point of claim and the point at which the policy was taken out [½]
For PMI, although some types of claims get declined (i.e. those relating to a specific pre-existing condition), the rest of the claims are paid [½]
however for LTCI, any pre-existing condition is likely to contribute to the need for long-term care (at least in part) meaning there is no possibility of making a claim [½]
Individual PMI business is likely to be high volume and relatively homogeneous risks, whereas individual LTCI may be lower volume and more heterogeneous [½]
it might therefore lend itself better to a case-by-case initial underwriting approach rather than offering standard terms at inception (that are less likely to be appropriate) [½]
LTCI claim types – many long-term conditions are likely be gradual, with no clear diagnosis / incident date (e.g. gradual deterioration of cognitive / physical functions / speed) [½]
many symptoms may have gone 'unreported', so have no formal medical evidence [½]
so it is less likely that these medical conditions would be picked up in retrospect [½]
whereas if applicants were asked specific questions at policy inception, then it might be possible that these are picked up to an extent [½]
LTCI claimants – these individuals may be old and infirm and need a simple and fair process [½]

they may be unable to provide adequate information at the claim stage – claims underwriting could be onerous for the insurer and confusing for the policyholder [½]

[Marks available 19, maximum 7]

[Total 12]

Part (i) which is a knowledge base question was well answered by most candidates.

Part (ii) was poorly answered by most candidates. Only the better candidates were able to distinguish the differences between immediate needs and pre-funded Long Term Care Insurance, as well as contrasting Long Term Care Insurance against Private Medical Insurance.

Part (ii) of this question differentiated the stronger candidates from the weaker candidates.

[Paper Total 100]

END OF EXAMINERS' REPORT

