



Institute  
and Faculty  
of Actuaries

# EXAMINERS' REPORT

CP1 - Actuarial Practice

Core Practices

Paper Two

April 2023

## **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.

For some candidates, this may be their first attempt at answering an examination using open books and online. The Examiners expect all candidates to have a good level of knowledge and understanding of the topics and therefore candidates should not be overly dependent on open book materials. In our experience, candidates that spend too long researching answers in their materials will not be successful either because of time management issues or because they do not properly answer the questions.

Many candidates rely on past exam papers and examiner reports. Great caution must be exercised in doing so because each exam question is unique. As with all professional examinations, it is insufficient to repeat points of principle, formula or other text book works. The examinations are designed to test "higher order" thinking including candidates' ability to apply their knowledge to the facts presented in detail, synthesise and analyse their findings, and present conclusions or advice. Successful candidates concentrate on answering the questions asked rather than repeating their knowledge without application.

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 2023

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

The aim of the Actuarial Practice subject is to use the technical and business skills learnt in the Actuarial Statistics, Actuarial Mathematics, Actuarial Modelling and Business subjects, combining them with new material on how the skills are applied to solve real world problems.

The subject provides the essential knowledge of risk management techniques and processes required by all actuaries and is an essential introduction to Enterprise Risk Management, subject SP9 and the Chartered Enterprise Risk Actuary qualification.

The subject also underpins the SP and SA subjects, covering essential background material that is common to a number of specialisms.

This subject examines applications in practical situations of the core actuarial techniques and concepts. To perform well in this subject requires good general business awareness and the ability to use common sense in the situations posed, as much as learning the content of the core reading. The candidates who perform best learn, understand, and apply the principles rather than memorising the core reading.

The examiners set questions that look for candidates to apply the principles specific to the situation set out in the questions, having read the question carefully. Candidates gain few marks by writing around the subject matter of the question in a more general fashion. Detailed specialist knowledge is not required and nor is very detailed development of particular points.

Good candidates demonstrate that they have spent time in the exam on understanding the breadth of the question asked and on structuring their answer - planning is a big advantage in making points clearly and without repetition. This also enables candidates to use the later parts of questions to generate ideas for answers to the earlier parts.

Time management is important so that candidates give answers to all questions that are roughly proportionate to the number of marks available.

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

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.***

Overall candidates scored the same average mark for Paper 1 and Paper 2 for this session. Paper 1 was much better answered than in previous sessions. It is also worth noting that the stronger candidates used the information provided in the questions to tailor their answers to the question and scored better."

**C. Pass Mark**

The Pass Mark for this exam was 62.  
1360 presented themselves and 612 passed.

## Solutions for Subject CP1-2 - April 2023

### Q1

(i)

Current and potential inhabitants of the island	[½]
Population neighbouring the island	[½]
Other parties related to other islands facing similar risks	[½]
Tourists visiting the island	[½]
Local government of island - politicians or employees	[½]
Stakeholders in businesses trading on the island or near the island	[½]
Stakeholders in companies contracted to maintain bridge and road	[½]
Neighbouring local government to the island - politicians or employees	[½]
National government of country - politicians or employees	[½]
General insurance companies e.g. providers of property insurance	[½]
Life insurance companies e.g. providers of term insurance to residents	[½]
Banks and other lenders providing financing to residents and businesses on island (for example mortgages on residential properties)	[½]
Potential sponsors of capital projects	[½]
Investors in national and local government debt	[½]
Central bank of country	[½]
Environmental groups	[½]
Bird protection groups	[½]
Climate change researchers, academics etc.	[½]
Country's taxpayers	[½]
Actuary undertaking the review	[½]
Parties engaged to provide advice or services to the actuary undertaking the review	[½]
Lawyers involved in the review	[½]
Marks can also be given for up to two other separate and valid stakeholders	[1]

[Marks available 12, maximum 6]

(ii)

*There are a large range of stakeholders with many potentially affected by the outcome from the review. Individuals could be included in several categories, and this could result in views obtained from stakeholder categories being influenced by conflict of interest.*

*There are a very wide range of potential conflict of interest, the examiners will give credit for a description of valid conflicts of interest. A few examples are given below.*

*(½ mark to be awarded for identifying conflict parties, ½ mark for a description of the conflict)*

Inhabitants of island who are members of environmental groups. May understate the impact on the environment of a new bridge and road as the road connection is directly affects them.

Homeowners living on island and working on the mainland. If their job directly depends on a good and reliable connection to the mainland.

Residents living on island in rented accommodation, working on the mainland and environmentalist. Has the option of moving to live on the mainland so can take low-cost action to avoid poor connection with mainland so prioritise environmental impact

however, they may not want to move or have family living on another island facing similar risks where decisions here could create a precedent.

[Total 3]

(iii)

The Actuaries' Code applies to all members of the IFoA irrespective of the work they undertake	[1]
The actuary will need to carry out their own due diligence on their appointment	[½]
The actuary first needs to identify what their role exact role will be within the review	[½]
The actuary must ensure they have an appropriate level of relevant knowledge and skill to carry out the review	[½]
or have access to people who do have the requisite level of knowledge and skill	[½]
They will also need to check that they have the capacity and the resources to undertake the review	[1]
The actuary must consider whether input from other professionals or specialists is necessary to assure the relevance and quality of work	[½]
If input is required from other professionals or specialists, the actuary should consider what types of other professionals or specialists are required	[½]
Depending on the actuary's role in the review they should either ensure that they will be able to obtain this advice and there are sufficient financial resources available to commission this advice or advise the local council to do so	[1]
The actuary must ensure that they understand the needs of the client for the review	[½]
For example, by understanding the scope and resourcing for the review	[½]
Understanding the required timescales for the review	[½]
Understanding the required output for the review (e.g. is a recommendation required)	[1]
Understanding the risk appetite of the government	[½]
and any constraints on the budget	[½]
The actuary must be aware of all regulations relating to environmental protection as well as any potential changes likely to these in the future	[1]
The actuary must ensure that their professional judgement is not compromised. The actuary will need to undertake an assessment that they cannot reasonably be seen to be compromised, subject by bias, subject to conflict of interest, or the undue influence of others	[1]
This assignment has many stakeholders and the actuary themselves could be included in many categories. The actuary will have to apply judgement on the extent of conflict of interest, how the risk it can be managed and disclose this to the client	[1]
The actuary must not act where there is an unreconciled conflict of interest	[½]
The actuary must take reasonable steps that in accepting the appointment they are not placed in a position where they are unable to comply with all relevant legal, regulatory and professional requirements	[1]
The actuary has an obligation speak up if they believe, or have reasonable cause to believe, that a course of action is unethical or is unlawful. The actuary should carry out an assessment that the appointment provides them with avenues to fulfil this obligation should they occur	[1]
The actuary must communicate appropriately. This review includes several complex issues where there is material uncertainty. The actuary should assess the knowledge and experience of the range of users	[1]
They will need to ensure that an appropriate communication plan, including training	

can be put in place to manage the risk that their work is misunderstood or misinterpreted in a way that could have a material impact [1]  
 [Marks available 17, maximum 7]

(iv)  
 A key risk that needs to be considered is the potential physical impact of climate change risk [½]

In particular the potential risks to the island and neighbouring mainland from:  
 Rising sea levels [½]  
 Rising temperatures [½]  
 Changing weather patterns and extreme weather events [½]  
 These risks are uncertain in terms of impact, frequency, and timing [½]  
 and will affect the road and bridge link as well as their maintenance [½]  
 The current and potential future exposure of the island and neighbouring mainland to transition risks will need to be assessed [1]

Sources of transition risks include:  
 Policy measure risks e.g. carbon taxes and energy efficiency standards [1]  
 Technical change risks e.g. move to renewable energy and electric / hydrogen vehicles which could increase the costs of the infrastructure needed [1]  
 Cultural and social trends risks e.g. increased demand for 'green' products, holiday destinations [1]  
 Demographic risks e.g. changing island demographic [1]  
 Climate change gives rise to liability risks, the potential costs from parties seeking compensation because they have suffered loss or damage from the effects of climate change [1]  
 This would include risks around current and future plans to provide compensation to parties or funding for climate change impacts. For example, there could be a cost of relocating all the island's residents and businesses [1]

Having assessed these the consequences for other risks will be assessed including:  
 The island's business risk including business disruption risks due to extreme weather, risks of relation, risk to profitability, employment risk, ceasing to trade risks [1]  
 For example, agricultural business will be affected by how climate change impacts what use can be made of land, loss of land etc. [½]  
 The wider country's business risks, for example financial institutions will be exposed to financing provided to the island's business and residents [1]  
 The risk to the current bridge and road from climate change, including magnitude of impact and timing [1]  
 Bridge and road maintenance risk both the direct cost and business interruption impacts [1]  
 Risk to bird habitat from climate change, this could affect environment impact of new bridge if the habitat would be lost due to climate change [1]  
 Political risks, the government could change which could lead to different priorities and reduced funding [1]  
 New laws could be introduced to protect the environment which could affect the review [½]

Risks to local government and that of neighbouring local government, for example climate change could be reducing revenue	[1]
Risks to national government, for example balancing the financial risks of compensation for the climate change impacts if no replacement bridge is built against the cost of new bridge and other protections for the island	[1]
The risks that the future costs of maintaining the bridge are higher than expected perhaps due to increasing cost of raw materials or increased costs of the workforce	[1/2]
Also impacted by interest rate risk and inflation risk as these could increase costs	[1]
The risk the lifespan of the bridge is less than expected	[1/2]
The operational risk that the bridge is not maintained adequately	[1/2]
The risk that the data available to carry out the review is insufficient, out-of-date, or of poor quality and therefore the review cannot be carried out to the required standard	[1]
The risk that the government does not have sufficient funds to maintain the bridge sufficiently or pay for a replacement solution	[1]
The government may not have sufficient expertise to maintain the bridge or come up with an alternative	[1/2]
Over the 50-year period the government may need to replace the bridge or come up with another solution	[1/2]
Up to two other risks can also be given credit provided they are explained well	[2]
[Marks available 27, maximum 9]	

(v)

*(1 mark awarded for each relevant risk with mitigation and justification of the mitigation. For example, bridge and road damage, mitigation insurance to protect against extreme weather events)*

[4]

(vi)

General issues with models that assess the impact of climate change:

*(Issues with models of climate change share similarities with models that assess longevity)*

Models are constructed by people and therefore are limited by human knowledge [1/2]

Even the world's best scientists have only an incomplete understanding of how key variables interact (the various atmospheric, land surface, oceanic and ice components interact) [1/2]

Even if knowledge of climate change were perfect, expressing this knowledge mathematically in a model is very difficult [1/2]

A model of climate change will use historical data within the calibration. A challenge with the historical data is that the quality and number of observations is not consistent [1]

This adds to the challenge to calibrate the model and trying to explain this historical data between trend and variability [1/2]

It is particularly difficult to assess adverse tail events for climate change [1/2]

Past data on climate change experience may not be representative of future climate change [1/2]

Future climate change experience may be very dependent on policy actions and mankind's response to climate change, which can be difficult to model in terms of timing and impact [1/2]

Computers have limited power, so it is necessary to balance available computer

power and complexity of the model	[1]
A lot of data will be needed for meaningful forecast which will add to the complexity	[½]
This may be difficult to obtain and may be expensive to process	[1]
Due to complexity, model may be time-consuming to run	[½]
The model will need to balance between geographical granularity against model sophistication. A consideration in this balance will be the model purpose	[1]
Climate model will be very complex so may need to buy an existing model	[1]
Expertise will be needed to run the model which may be expensive and difficult to resource	[½]
It may be difficult for the actuary to understand and interpret the model (black box risk)	[½]
The review is focused on one island which is a small geographical area. The model of climate change will not be intended to have a high degree of accuracy at this granularity	[1]
This is less likely to be an issue for trends for risks covering the wider region. However, the specific island risk for variability of extreme weather events is likely to be less accurate	[1]
In any event all a model is a model so whilst it can indicate trend, risk and uncertainty it can't predict the actual future weather events for the island	[1]
Whilst there is strong evidence for climate change there are a range of views. Given this there are general issues in trying to then try and identify conscious and unconscious bias of those involved in developing and calibrating models for climate change	[1]
Whilst there may be a lot of issues with modelling the impact of climate change, it is still work doing to try and assess the impact	[½]
	[Marks available 15, maximum 5]

(vii)

Note that a 20-year fixed cost maintenance contract has similarities with a long-term insurance product.	
In return for a known fixed one off or series of payments the local government will expect to receive an agreed service	[1]
That service will be governed by a contract	[½]
The benefit to the local government should be that they could fix the cost for maintaining the road and bridge for 20 years	[1]
This gives it financial certainty over its commitment for this period	[½]
However, this certainty can also result in a reduction in flexibility. It would lose the current flexibility it has to take account of its financial resource constraint in the amount it plans to spend on bridge and road maintenance	[1]
The contract will have the advantage that local government will not need to use resources to appoint and manage third parties each time bridge and road maintenance is needed	[½]
The local government will also have to set out in advance in the contract the maintenance standard that is required. Otherwise, the contractor may cut corners to save costs or use low quality material	[1]
The contract is also likely to set out the standard for the availability of the bridge to users which is important here given it is the only connection with the mainland	[½]
There could be penalties if work is to a poor standard and even potential termination of the contract if it is very poor	[1]

The higher the standards required to be met the higher the likely cost of the contract	[½]
The service provider is expected to allow for the cost associated with all elements of the long-term guarantees provided within the contract. The greater the risk transfer to the service provider the greater the cost to the local government	[1]
There is a risk that local government overpays for contract due to overestimating future maintenance costs and the impact of climate change	[½]
Also, when pricing the contract, the service provider will include a contingency margin and an allowance for profit	[1]
The service provider themselves would seek to manage the risk exposures they take on. There are a range of ways of doing this including using insurance, financial contracts (for example derivatives on commodities), or alternative risk transfers	[1]
Where the service provider themselves can diversify retained risks across other contracts, or benefit from diversification itself from the transfer and pooling of risk the service provider would be expected to charge less	[1]
One of the significant and material risks being transferred is the impact on maintenance costs arising from the development of climate change. Also, there will be protection from the impact of inflation on raw materials/salary costs of maintenance	[1]
The local government is exposed to counterparty risk under the contract. If the service provider defaults it will lose the benefit of the risk transfer	[1]
A default is most likely to occur in adverse scenarios and least likely in favourable scenarios	[½]
In favourable scenarios the current approach of planning and financing is likely to cost less than the maintenance contract	[½]
In the adverse scenarios where there is a default the local government would lose the benefit of the risk transfer so have to pay the higher cost itself	[½]
A service provider will have a risk appetite and will generally be limited liability companies	[½]
A service provider with a high credit rating is likely to have less appetite for high downside risk contracts	[½]
A high credit rating service provider is, in this circumstance, less likely to tender for the contract or only do so for a cost commensurate with its own risks including credit risk	[1]
In contrast, a low credit rating company may be willing to accept greater risk and charge less in the knowledge that it will be unable to withstand adverse scenarios and can default	[1½]
The national government may currently provide additional discretionary financial support when adverse events (e.g. severe storm) occur. Consequently, the local government could decide to retain certain risks, although it would be exposed to national government not providing support	[1]
However, by retaining such tail risks it could benefit from a lower price and more higher credit rating service providers tendering for the contract	[1]
Need to consider whether a different timescale may be more appropriate	[½]
Due to climate change uncertainty a shorter term (e.g. 10 year) renewable term may be better	[½]
A longer timescale could match the review duration better but will involve more uncertainty and so may be prohibitively expensive	[½]
The contract is likely to be acceptable to the local population and businesses as they will have increased certainty of good transport links to the mainland	[1]
This could improve popularity of the local government	[½]

Also, there will be certainty for the population even if local or national government changes [½]  
 The maintenance company would benefit from the contract as they will have a 20 year commitment and so can plan their resources more effectively [1]  
 [Marks available 2½, maximum 11]

(viii)

Local government could fund this by taxes on residents or charging a levy to its residents for this purpose [1]  
 These may be considered unfair as it is not only the local residents that would benefit [½]  
 The local government could look to sell some of its assets to pay for the maintenance contract [½]  
 Or it could issue a bond to pay for the contract [½]  
 Crowd funding / fundraising / local lottery on the island and nearby mainland could be used if local people support the contract [½]  
 As this is a critical connection to the mainland, the local government could try to get the national government to assume responsibility for the maintenance for a fixed cost [½]  
 The national government can diversify its risks over the whole country and transport network [½]  
 The national government will have a stronger negotiating position than the local government, so may be cheaper. Although this is likely to lead to less control over the road and bridge maintenance levels [1]  
 There may be increased unavailability of the bridge and road following a severe adverse event as the national government will have to prioritise its resources [1]  
 It may need to increase taxes or reduce other expenditure [½]  
 The national government could issue a bond to fund the contract [½]  
 The local government could start charging a toll for the use of the road and bridge [½]  
 This will transfer part of the cost to the users that are not residents and businesses on the island [1]  
 However, the amount raised may be less than expected because fewer journeys may be made to the island [1]  
 and business could relocate to the mainland to save costs for themselves and their employees on the mainland [1]  
 This would have adverse consequences for the economy of the island [½]  
 The local government could enter into a contract with a private company. The private company could meet the upfront costs in return for the future revenue e.g. tolls [1]  
 They could also consider sponsorship by local companies to provide some of the funds required [½]

[Marks available 12½, maximum 5]

**[Total 50]**

*Part (i) This question was answered very well with most candidates producing a full list of stakeholder and therefore scoring full marks.*

*Part (ii) This question was answered very well with most candidates identifying three appropriate conflicts and then went onto explaining them sufficiently to score*

most marks.

*Part (iii) This question was not answered as well as the first two parts and was a question that differentiated the candidates. The better prepared candidates' answers focused on what the question was asking for - i.e. they looked at what to considered before undertaking the review.*

*Part (iv) This question was generally answered well with many candidates scoring more than 70% of the marks available, those candidates that did very well made a good range of points.*

*Part (v) This question was answered very well with many candidates scoring more than 70% of the marks available.*

*Part (vi) The average candidate tended to score 60% on this question with reasonable attempts being made.*

*Part (vii) This question was not answered as well as expected with many candidates not providing the breadth of points and then developing those points to score the marks on offer.*

*Part (viii) This question was not answered well - although there were strong answers from some candidates. The better prepared candidates focused on the question and picked up things like tools, support from the national government or other relevant points. The less prepared candidates gave examples that were not really relevant to the case study.*

## Q2

(i)

Motor insurance	[½]
Home insurance - contents	[½]
Home insurance - building	[½]
Life cover - term assurance offering cover over a fixed term	[½]
Life cover - whole life or funeral cover	[½]
Travel insurance	[½]
Domestic appliance insurance	[½]
Health insurance - if this is not provided by the state	[½]
Critical illness cover	[½]
Long term care cover	[½]
Income protection	[½]
Retirement annuity	[½]

[Marks available 6, maximum 3]

(ii)

Traditional insurance pricing involves pooling of risks	[½]
Within the pooled group, the relatively low-risk policyholder would be cross-subsiding the relatively high-risk policyholders	[1]

More advanced insurance pricing will result in much narrower groupings of risk	[½]
This will result in the lower-risk potential policyholders being offered more competitive premiums	[1]
This will mean that other potential policyholders (higher risk) will be charged higher prices or may even be refused insurance cover	[1]
People living in relative poverty are much more likely to be in higher risk groups and so will be particularly affected by advanced pricing and underwriting	[½]
Citizens on low incomes are more likely to live in areas with higher crime rates	[½]
This would increase their risk relating to theft of their belongings and so their premiums will be higher	[1]
This may also mean that they have a poor claims history which would further increase premiums	[½]
They may work in a more dangerous work environment so more risk will lead to higher premiums	[1]
Citizens who are in poor health may be unable to work and so may be living in relative poverty	[½]
Their health status is likely to result in higher premiums or even refusal on some insurance products	[1]
Younger and older citizens may be more likely to live in relative poverty	[½]
Their ages make it more likely that they may be refused cover or premiums quoted are much more expensive than for others	[1]
This is particularly likely to apply to motor insurance which is compulsory cover for all drivers	[1]
These citizens living in relative poverty may also be subject to exclusions on their policies	[½]
It would have much more of an effect on them than other citizens due to their limited income and capital	[1]
Similarly, they may be subject to higher excesses which they cannot afford	[1]
They may not be able to afford additional expenses which could lower premiums e.g. burglar alarms	[½]
The minimum premium and / or minimum sum assured may be higher than these citizens need leading to higher premiums than necessary for these citizens	[1]
They will be less likely to be able to afford annual premiums	[½]
Monthly premiums are usually a relatively expensive way to pay with an APR far in excess to commercial rates of interest and this will disadvantage these citizens	[1]
Further	[1]
These citizens may be less likely to have internet access and so may not be able to access more competitive premium rates that may be available online	[1]
Even if their premiums were not higher these citizens would find it more difficult to afford insurance due to their lower income	[½]
Individuals with lower incomes may have low levels of financial knowledge and may not know the best way to access suitable insurance	[1]
They may end up buying products that are more expensive than they actually need	[½]
Individuals on lower incomes may not have access to good quality financial advice and end up buying products that are more expensive than they actually need	[1]
Individuals on lower incomes may be forced financially to cancel their products early as they cannot afford the premiums, and this may give them very poor value for money	[½]

The charging structures of the products may penalise lower premium amounts (and therefore penalise individuals on lower incomes). For example, if there are fixed monetary charges [1]

Given that these citizens may be less likely to take out insurance the data available relating to them may be limited [½]

Lower income can also be associated with:

Less access to healthcare [½]

Poorer nutrition [½]

Poorer quality housing [½]

These will lead to greater risk and higher premium [½]

[Marks available 25, maximum 11]

(iii)

The government will want to ensure that all citizens have at least a minimum standard of living [½]

The government will be concerned that if citizens cannot access or afford insurance, they will not be covered for the risk events they need to be. This could have a significant effect on the individuals concerned and their families [1]

This is likely to lead them into further financial difficulties if any of the risk events occur as they will not have the spare income or capital available [1]

For example, for home contents insurance, the individual would be unlikely to be able to replace any items lost if they were stolen or destroyed in a fire [1]

For whole life / funeral insurance, the family of the individual may be unable to provide a funeral without a suitable policy as they would be unlikely to have sufficient savings [1]

Similarly, if health cover was not provided by the state, then individuals would be unable to afford medical care without health insurance [1]

In these circumstances the government is likely to have to provide support [½]

If the government is not able to provide support to individuals this is likely to lead to unhappy individuals and therefore unhappy voters who may take out their unhappiness on the government at the next election [1]

If these citizens were unable to access affordable motor insurance, they would not be able to legally drive [½]

This could have a significant impact on the individuals and may affect their chances of employment [1]

This again may mean that additional state support is needed [½]

The government may be concerned that these citizens are paying large insurance premiums which may lead to further poverty [½]

The government may have made election promises relating to looking after all its citizens and reducing poverty [1]

Ensuring all citizens have access to affordable insurance may be part of this promise [½]

[Marks available 11, maximum 6]

(iv)

The government could provide the insurance themselves [½]

They could use the methods of pooling risk that they consider to be suitable and offer their products to all citizens [1]

They would need to take care in their assumptions to ensure they considered how anti-selection may operate for such policies [½]

These policies could be relatively simple with no additional features	[1]
This should reduce the cost and increase the attraction to citizens who only want basic cover	[1]
The government could subsidise the insurance they offer	[½]
This could take form of a maximum price to ensure the subsidy was being used for those most in need. However, this could be subsidising individuals with high risks who are not poor	[1]
Or maximum premium rates could be imposed by regulation	[½]
There could be relatively low covers on these policies	[½]
This should make them cheaper and are likely to be of more appeal to the citizens in relative poverty	[1]
The government could introduce new regulations. This could include disallowing certain rating factors in pricing insurance policies	[1]
For example, postcode, age, occupation	[1½]
They could introduce regulations to prohibit the use of pre-existing health conditions as part of the underwriting process	[1]
They could also ensure the terms and conditions of insurance policies did not exclude pre-existing conditions	[½]
The regulators could check the models being used by insurance companies to ensure that the assumptions being made do not lead to pricing which disadvantages those in relative poverty even more	[1]
Legislation could be introduced relating to pricing for monthly paid premiums relative to annual premiums. A maximum APR could be introduced	[1]
The government could also work with insurance companies to provide suitable insurance cover	[½]
For example, by requiring insurance companies to offer low cost, simple, quality products to the less well off with high levels of disclosure in simple terms so individuals can understand and access appropriate cover	[1]
These products could be offered through a range of sales channels which could be regulated to ensure they were suitable for this market	[1]
They could ensure that it was clear which products were intended for the less well off	[½]
The government could provide education to explain the benefits of insurance and the products available to meet different needs	[1]
And also how to access insurance in a cost-effective manner	[½]
They could provide incentives (tax reductions) for insurance companies providing suitable policies for citizens in relative poverty	[1]
They could pay the insurance company for the additional cost of cover due to certain rating factors (e.g., location)	[½]
This would effectively subsidise the cost of insurance to these citizens so that it was available to them at a more standard price	[1]

[Marks available 20½, maximum 11]

(v)

The insurance company should have clear unambiguous standards about the requirements that all products must meet to be regarded as ethical	[1]
The company should ensure that it is complying with any relevant legislation about what constitutes an ethical product or fund	[1]
The company should have clear policyholder literature that sets out the ethical standards that its products will abide by	[1]

The company will need to regularly monitor that the ethical products it is operating are meeting the standards it has set out internally and to its policyholders	[1]
They could set up an ethics committee which would report regularly to assess the company's ethical standards and assess ethical issues	[1]
If the company offers a product or fund to policyholders which subsequently does not meet its ethical standards it will need to stop selling the product or fund	[1]
The company may need to produce regular reporting to stakeholders being clear why what they are doing has met the relevant ethical standards	[1]
They may choose not to offer some insurance products if they don't fit in with their ethical values	[½]
For example, they may not offer motor insurance or may only offer this cover for electric vehicles	[1]
They may aim to offer products suitable for citizens living in relative poverty	[½]
They will need to ensure their pricing is fair to all potential policyholders, so care will need to be taken over rating factors	[1]
All charges should be fair and transparent	[½]
Product terms should be simple and should be in clear language	[1]
They will also need to ensure that their claims are settled fairly	[½]
So would not expect complex terms and conditions which could see claims being reduced or disallowed	[1]
The surrender terms should be fair	[½]
For insurance to offer businesses, they may choose to specialise in ethical businesses	[½]
Or they may choose not to offer insurance to some types of businesses which do not fit in with their values	[1]
The insurance company will need to ensure that other companies involved with the products are also ethical. For example, brokers, reinsurers, external advisors	[1]
They will need to ensure their business backing the products is run in an ethical manner	[½]
Will need to provide good customer service	[½]
Offices will use renewable energy, will recycle	[½]
All policy literature will be electronic	[½]
Will need to ensure that the investments backing the product liabilities are ethical	[½]
And also, that the funds allowed within their products are ethical	[½]
Should not make excessive profits. They may give some of their profits to good causes	[1]

[Marks available 20, maximum 8]

(vi)

After rebranding the insurance company will need to ensure that all the investments it holds are suitable for an ethical company	[1]
This will apply to all its assets, so those backing liabilities and free assets held	[1]
They will need to be very clear what they mean by ethical. This will ensure that their customers' expectations are met	[1]
This is particularly important as there will be reputation risk if their investments are not considered suitable	[½]
The insurance company may need to update their investment mandate	[½]
The risk / reward balance of the portfolio could be affected	[½]
More specialist expertise may need to help with the new strategy	[½]
They will need to sell the holdings that are no longer suitable and invest in suitable	

ethical investments	[½]
Some of the investments that need to be sold would be clear, but others may need more investigation to see if they were still appropriate	[1]
They may not be able to sell all their investments immediately without incurring an unacceptable loss	[1]
so they may put in place an operation to sell them gradually over time. There may be a reputation risk with this approach	[1]
They could consider using shareholder pressure to influence the companies they invest in to become more ethical	[½]
The company will need to ensure all the equities it invests in meet their ethical standards. For example, no investments in arms or companies destructing the environments, no child labour	[½]
Similarly, for any corporate bonds they hold, they will need to ensure the company behind the bond meets their ethical standards. For example, may not invest in a bond of a tobacco company	[½]
They may choose to invest in infrastructure which meets their ethical aims	[½]
They will want to ensure that any property investments are suitable and meet all environmental requirements	[½]
If they invest overseas, will need to ensure that their ethical standards can still be met. This may be more difficult as there may be less information available	[½]
It may be difficult if investing in index trackers to understand ethical standards of constituents as these will change overtime	[½]
Will still need to ensure that their assets are suitable for the liabilities they hold. Will also need to ensure they have sufficient liquidity to meet all liabilities when they are due	[1]
The company will need to monitor its investments to ensure they continue to meet ethical standards	[½]
and sell any assets that subsequently don't meet those standards	[½]
Policyholders will need to be informed if funds they are investing in subsequently don't meet the ethical standards the company has published	[½]
The company will also need to demonstrate that performance is up to policyholder expectation	[½]

[Marks available 15, maximum 7]

(vii)

The insurance company could target a more suitable product offering for the low paid e.g. microinsurance	[1]
They could service their product offering for the lower paid more cheaply and therefore be able to offer lower cost products. For example, through mobile phones rather than using paper or online	[1]
They could amend their product structure. For example, no fixed monetary charges	[1]
They could ensure that the risk factors they use to price their insurance do not disadvantage the citizens living in relative poverty more than others	[1]
They could use very broad risk pools to ensure this doesn't happen	[½]
They could ensure their underwriting approach was fair to all	[½]
They could ensure that they did not use exclusions which would mean that these policies would be unsuitable for these citizens	[1]
Similarly for excesses which may be unaffordable for these citizens	[½]
They could allow pre-existing conditions	[½]
They could keep their policies simple to ensure they are easy to understand and do	

not have to include the costs of any options or guarantees	[1]
They could ensure that prices were low for low levels of cover. They could use a marginal costing approach for such policies	[1]
Monthly premiums could be priced as $1/12 \times$ annual so no penalty for being unable to pay upfront	[1/2]
The insurance company will need to be seen to be trustworthy	[1/2]
so need fair and compassionate claims management approach will be needed	[1/2]
	[Marks available $10\frac{1}{2}$ , maximum 4]
	<b>[Total 50]</b>

*Part (i) This question was answered exceptionally well with most candidates scoring full marks.*

*Part (ii) This question was not answered as well with candidates scoring a range of marks between 4-7 being most common. The main issue for candidates was making a wide enough of points to score well.*

*Part (iii) This question was not answered as well with the average score being around 50% of the marks available. Again, the main issues for candidates was around providing enough breadth in their answers and then building on the points made.*

*Part (iv) This question was not answered as well with the average score being less than 50% of the marks available. Many candidates' answers lacked a wide range of well-developed points. Most candidates picked up the basic points (e.g., subsidies) but there was also a lot of candidates' answers that didn't make the solution relevant to the question being asked (e.g., forcing citizens to do things).*

*Part (v) This question was reasonably well answered with the better prepared candidates giving more breadth in their answers.*

*Part (vi) This question was not answered as well as expected with the average score being less than 50% of the marks available. Sufficient breadth of answers was the main concern.*

*Part (viii) This question was reasonably well answered with around 50% of the marks available being the average score - with stronger candidates giving a wide range of ideas.*

**[Paper Total 100]**

**END OF EXAMINERS' REPORT**



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