

# **Institute of Actuaries of India**

**Subject SA1– Health and Care**

**March 2021 Examination**

## **INDICATIVE SOLUTION**

### **Introduction**

The indicative solution has been written by the Examiners with the aim of helping candidates. The solutions given are only indicative. It is realized that there could be other points as valid answers and examiner have given credit for any alternative approach or interpretation which they consider to be reasonable

**Solution 1:****i) Reasons for offering such schemes:**

It provides the opportunity to insure the liability for statutory sickness payments and any discretionary sickness payments made as part of the employer's custom and practice. [1]

It provides the opportunity to offer employees valuable long-term sickness benefits to complement benefits that may be available from the employer's occupational pension scheme. [0.5]

This will enhance the total reward package for employees, attracting better staff, reducing staff turnover and improving staff morale. [0.5]

It provides the opportunity to access support, help and advice to assist in the management of sickness absence in the workforce. [1]

It will be valued by the employees and will create a loyalty to the employer. [0.5]

There could be favorable tax treatment to the employer and/or employees. [0.5]  
[3]

**ii) Group IP product****(i) Policy conditions**

The more flexible the benefit structure is, the wider the range of employers to whom the product appeals will be. [0.5]

The following are examples of the terms and conditions that may be included:

Offer a range of deferred periods, say from 1month to 1 year. [0.5]

Short deferred periods would allow employers to buy insurance to cover the risk of statutory sickness benefits. Longer deferred periods could be offered for lower premiums. [0.5]

Require early notification of sickness absence (eg halfway through the deferred period). [0.5]

This will enable the insurer's counseling and advice service to have an early impact and perhaps prevent a claim coming into payment. [0.5]

An occupation-based definition of incapacity is probably appropriate – for example based on being unable to perform any or all of the duties of their own occupation. [0.5]

This will match the employees' initial needs. The definition might be changed to a less restrictive one after, say 2 years of incapacity. [0.5]

Require medical certification of incapacity and re-certification every six or twelve months during periods of incapacity. This is essential if the insurer is to maintain effective control of claims. [0.5]

Certification should be checked by the insurer and not the employer. This will allow the insurer to exercise effective claims control, and avoid any temptation that the employer may have if allowing claims would be to the employer's advantage, eg during periods of economic recession. [0.5]

Enforce a benefit limitation so that there is an incentive for claimant to return to work, for example:

Some percentage of pre-disability income less all sources of continuing income

The percentage could vary as per the prevailing practices but will certainly be less than 100%. [1]

This will take account of any ill-health retirement pension that may be paid after claims payments begin. [0.5]

Pre-disability income will need to take account of bonuses and other irregular payments by averaging over a defined pre-disability period, say 1 year. [0.5]

Make an allowance for linked claims with a linking period of, say, three to six months. [0.5]

This will encourage employees to return to work because they know that if they fall sick again benefits will continue without the need to wait until the end of another deferred period. [0.5]

Allow proportionate benefits on a partial return to work, or a return to work in a new less well-paid role. This will also encourage employees to return to work, and so help to reduce claims costs. [0.5]

Have a waiting period of employment before employees are eligible to join the scheme, eg twelve months. [0.5]

This will reduce overall claims, limit anti-selection and help to reduce administrative costs because it will save the costs of arranging for temporary and short-term employees to join the scheme. [0.5]

Ensure that there is compulsory scheme membership for all eligible employees or allow voluntary membership but only with a high participation rate. [0.5]

This will reduce anti-selection. [0.5]

It could offer a stepped benefit structure (eg 100% of salary for the first six months of incapacity, then 50% of salary after six months). [0.5]

It may link benefits in payment to an index of wages, if this is possible, to satisfy the need to maintain prosperity during incapacity. [0.5]

It should link the possible expiry ages for benefits to the range of normal retirement ages in the employer's pension schemes. [0.5]

[Max 8]

## (ii) Underwriting

Impose a free-cover limit to control morbidity risk [0.5]

This may have a significant effect because there is likely to be a wide variation in incomes within the group. [0.5]

If membership was compulsory or if the proportion of eligible employees joining was high, then the free-cover limit could be more generous than if membership was entirely voluntary. [1]

Those above the free-cover limit would be underwritten, probably using the insurer's individual underwriting procedures. [0.5]

As a general underwriting criterion, we could insist that all new members must have been continuously at work with no days of sickness absence in, say, the three months immediately prior to joining the scheme. [0.5]

This is an appropriate criterion as it is directly related to events that lead to claims. [0.5]

Specific exclusions might be appropriate in cases of chronic disease, eg severe asthma, ... [0.5]

... but in general we would want to avoid these because the employer will want universal cover and claim administration will be simplified. [0.5]

The risk factors to be considered in simple underwriting include:

- time spent in more dangerous environment (eg working or supervising on site, on factory floor) [0.5]
  - time spent driving as an integral part of the job [0.5]
  - time spent overseas as an integral part of the job. [0.5]
- [Max 6]

### (iii) Claims administration

There should be telephone helplines to advise people on their entitlement to State welfare benefits, ... [0.5]

... on what they can do to manage their condition and on the policy conditions relating to their claim (eg the possibility of part-time working). [0.5]

Manage claims when they come into payment by using the counselling and advice service to ensure that claimants are aware of all the sources of help available to them. [1]

Rather than doing this directly the insurer could offer training and advice to enable the employer's human resources department to deal with most day-to-day queries. [0.5]

Require that claimants provide regular evidence of their continuing incapacity, in order to minimise fraudulent claims. [1]

Also manage the financial aspects of claims by regularly checking on other sources of income that should be offset against the maximum claim entitlement. [0.5]

Require the employer to make valid claims payments as part of the payroll, and to account to the insurer for these payments on a regular basis, perhaps as an offset against the premium due. [0.5]

This will help to control claims and reduce the administrative costs of claims for the insurer. [0.5]

Some new business may involve taking over the insurance of an existing group scheme from another insurer. [0.5]

In such cases, the insurer might take on responsibility for all the current as well as the future liabilities of the scheme. [0.5]

[Max 6]

[20]

### iii) Different Scheme for workers & managers

#### Differences in Worker's scheme

In general, benefits are likely to be lower than for the managers' scheme, ... [0.5]

... because the employer may feel that recruitment and retention is more important when considering managers. [0.5]

However, these workers are not as likely as the managers to have comprehensive ill-health retirement benefits. [0.5]

The employer may be more concerned with providing these workers with benefits related to salary (as opposed to flat rate benefits, for example) than in the case of the management scheme, particularly to cover long-term permanent sickness for these members. [0.5]

#### Underwriting

If there is less variation of wage levels between members of a scheme, the free-cover limit will be a less important consideration because it will be less likely to apply. [0.5]

However, if overtime payments and bonuses are included in the calculation of pre-incapacity income, there is likely to be more variation in incomes between members, and so a free cover limit may have more impact. [0.5]

Other underwriting procedures can be the same as those for the managers' scheme, ... [0.5]

... except we would want to identify those whose work involved above average risk (eg working with heavy machinery, working at heights, working with hazardous chemicals or materials, Drivers etc). [0.5]

Manual workers will tend to have higher sickness rates. So, all other things being equal, the premium rates will be higher than those for the managers' scheme. [0.5]

#### Policy conditions

These workers are likely to be mainly involved in heavy manual work. In these cases even a slight incapacity (eg fractures or severe cuts) can prevent a person from following their normal occupation. [0.5]

A less stringent definition of incapacity than inability to follow one's own occupation might be appropriate. [0.5]

For example, use own occupation for the first 24 months of incapacity and thereafter use inability to follow any occupation to which the insured is suited by education or training. [0.5]

If there was no prospect of their returning to their old job, employees might welcome the support provided by the employer and the insurer to train for alternative (less physically demanding) work. [0.5]

Manual workers may have different terms and conditions of employment, particularly those relating to sick pay. So we may need to offer a different choice of deferred periods for the scheme. [0.5]

#### Claims administration

Claims will in general be smaller in amount and may be more frequent, ... [0.5]

... and so will be relatively more expensive to administer. [0.5]

If the employer deals directly with claimants, the employer may devote fewer resources to these employees than to the more highly paid and vital (from the employer's point of view) managers. [0.5]

**[Max 7]**

**iv) Extending to family members**

Policy conditions

Not all family members will have a regular occupation, and so having a claim definition that relates to occupation will be difficult. [0.5]

Using an occupational definition for some family members and an alternative definition for those not in employment would be administratively complex. [0.5]

It would be possible to devise a personal capability assessment that consisted of a number of tasks related to everyday living, ... [0.5]

... eg walking a given distance unaided, climbing stairs, ability to understand and follow instructions. [0.5]

A person would have a valid claim if they were unable to complete a specified number of these tasks. [0.5]

An alternative would be to use a test related to appropriate activities of daily living. [0.5]

So for a spouse we might use tasks such as travelling unaided on public transport, going shopping, ability to deal with money and other financial tasks; ... [0.5]

It would be possible to offer benefit levels defined in terms of the member's salary (eg 50% of member's benefit for a spouse). [0.5]

This would have the advantage of relating benefits more closely to the impact of the insured event on the financial position of the family. [0.5]

The alternative would be a flat rate benefit (eg Rs 100,000 pa for a spouse), subject to maximum payment equal to the insured's benefit, say. [0.5]

Benefits could be linked to an index, probably of national wage levels. [0.5]

Spouses may have income during incapacity from other sources (eg their own employer's sick pay scheme, statutory benefits) and, although this may be small, it should be deducted from the maximum entitlement. [0.5]

A long deferred period, eg 6 months or 1 year, would reduce the cost of claims management and help if there had been limited underwriting. [0.5]

However, a shorter deferred period may more closely match the risks faced by someone keeping house. But this would increase the costs of this extension of the scheme considerably. [0.5]

Claims management

The claims criterion is likely to be related to personal capabilities rather than to a medical condition, so the insurer will need to put in place procedures for this assessment. [0.5]

The assessment would need to be repeated on a regular basis. [0.5]

If someone seen to be independent of the insurer carried out the assessment procedures, then disputes about assessment should be less likely. [0.5]

A counselling service could ensure that claimants applied for all the State benefits to which they were entitled and sought remedial therapy (eg physiotherapy to aid recovery). [0.5]

#### Underwriting and pricing

If nearly all employees were in the scheme, and cover extended to all their dependents, then the additional premium could be a simple percentage loading based on the main premium. [0.5]

The loading would be based on an estimate of the average family size of the members of the scheme. [0.5]

If this were the case and employees were allowed to decide whether or not they wished to extend cover to their families, there would be considerable opportunity for selection against the insurer, eg those with large families would be more likely to elect to join. [0.5]

Using additional rating factors (such as age and gender of the spouse) to determine the additional premiums could reduce this selection. [0.5]

This would involve considerable data collection because the employer will not have details of the family members. [0.5]

Medical underwriting of family members could be considered, but this may be costly compared to the savings it achieves. [0.5]

An alternative is to have a moratorium on claims related to pre-existing conditions, and to require two years free of symptoms and treatment before claims related to these conditions are allowed. [0.5]

[Max 12]

#### Advantages and disadvantages for the insurer

##### Profitability

+ Increased premium income should lead to greater profits. [0.5]

+ This feature may make this new policy unique in the market place. This novelty is likely to encourage brokers to actively consider it as an alternative in reviews of providers for their current clients. [0.5]

+ The perceived value of the benefit may be much more than the additional premium. This will reinforce its attraction for clients. [0.5]

Underwriting – Data collection for underwriting would be more complex. [0.5]

– Statistical data to cost the additional risk may be very limited. This may not be a serious problem as the additional benefit is packaged with the main benefit, and some element of cross-subsidy is acceptable. [0.5]

[0.5]

Administration – Premium collection would be more complex unless the structure was very simple, eg flat % addition to base premium. [0.5]

– The costs of administering these claims may be considerably greater than the costs of employee claims ... [0.5]

... because while the employer can provide data about the employee (eg demographic details, salary), the employer is unlikely to have data about spouse. The insurer will need to acquire this data directly. [0.5]

– Personal capability assessments for spouse will be more costly to administer than the occupationally-based criteria used for employee’s entitlement to benefit. [0.5]

[Max 4]  
[16]

**v) Asset-liability modeling**

The company will project its liabilities using a model office. [0.5]

It will need to select suitable sample policies (model points) to represent the business. [0.5]

It needs enough model points to make the model realistic, but few enough to keep computer run times to a reasonable length. [0.5]

The liabilities are likely to be projected deterministically, although a stochastic inflation rate might be used for expenses. [0.5]

The company will have to decide whether or not to include new business. [0.5]

The model will be unrealistic without it, but it is difficult to predict. [0.5]

The company will have to decide on a suitable number of simulations (eg 1,000 to 10,000) ... [0.5]

... and an appropriate time period (eg 5 to 25 years). [0.5]

It will choose a trial investment distribution and project the returns on this investment mix using its stochastic model. [0.5]

It can then vary the investment mix and repeat the exercise a number of times to see which mix is most appropriate. [1]

To decide what is “best”, it needs to have chosen suitable criteria for judging this. [0.5]

One possibility would be to maximise return subject to an acceptably low probability of insolvency. [0.5]

An alternative proviso would be a high probability of maintaining sufficient free assets to allow investment freedom. [0.5]

Another possible criterion would be maximising expected shareholder transfers subject to an acceptably low probability of an undesirable result (eg supervisory capital position too weak to attract new business). [1]

The choice of parameters for the model, particularly the random terms, will have a large impact on the results, and so must be chosen with great care. [1]



Dynamic interactions should be built into the model. [0.5]

For example, lower investment returns should reduce projected benefits as it is linked to the salary which is expected to be lower. Also, the expense inflation should also reduce. [1]

Because of the complexity of the model, it will have to be “solved” using simulation techniques rather than analytically. [1]

All results should be checked for reasonableness. [0.5]

**[Max 12]**  
**[58 Marks]**

### **Solution 2:**

**i) Health insurance penetration is typically a function of:**

- Easy to buy and claim [0.5]
  - o Initial underwriting/ paperwork is seen barrier to buying insurance policies - this set up can help consumers complete the process anytime anywhere with greater ease
  - o Direct to customer (D2C) model without having to deal with intermediaries will likely have greater appeal to the younger generation
  - o Insurance buying will be unaffected by external events such as an epidemic/pandemic when the need/demand for protection is strong
  - o Claim process can be made smooth and fast [0.5 per point; max 1.5]
- Priced right/attractive – value for money from the consumers view-point [0.5]
  - o Virtual setup/processes can be very cost effective and thus enabling better pricing
  - o Cutting out on intermediary cost will help reduce the price
  - o Claim management – programs such as wellness can be built in more seamlessly in order to focus on prevention, timely care etc. in order to reduce the claim cost
  - o Lot of data points electronically tracked and so fraud/abuse can be minimized/ better controlled [0.5 per point; max 1.5]
- Products meeting the needs of the customers [0.5]
  - o Modular/menu-style product innovations can happen with the virtual setup being better placed to deal with admin complexities associated with such product designs
  - o This will allow customers to pick and choose the right combination/level of benefits tailoring to their needs [0.5 per point; max 1]
- Increased awareness on the importance of insurance for protection [0.5]
  - o In the current era of e-commerce, this move is likely to attract attention of the public and curiosity
  - o Current non-virtual players will also have to beef up their marketing in order to compete [0.5 per point; max 1]
- Consumers trust in the industry in general [0.5]
  - o All the above have the potential to build and cement consumers’ trust in the insurance industry in general [0.5]

**[Max 6]**

**ii) Lower Required Capital:** Regulator may require lower Paid up capital for such set-ups.

Pros:

Improve ROCE

Improve ratio of Available to required capital

Encourage more investors- hedge funds, VC, private equity to engage into such ventures

Cons:

- May encourage risk taking and become aggressive in view of low upfront investment
- May encourage capital arbitrage across jurisdictions

**Lower risk score factors to improve Solvency:** Regulator may use a more lenient solvency capital requirement matrix (Underwriting/claims/equity/interest/credit/operational) for such set up

Pros:

- Improve Solvency ratio through better ratio of available to required capital
- Better solvency ratio => improved

Cons:

- Solvency arbitrage may be present
- May encourage adopting of regulatory arbitrage solutions between segments of businesses (online vs traditional insurers) that do not improve risk transfer materially

**Corporate tax breaks:** may be granted to such initiatives

Pros:

- Strong incentive to adopt this model

Cons:

- Unfair competition/lack of level playing field - May be perceived to be unfair to the other insurers who have more ongoing costs/recurring and maintenance costs with physical set ups

**Flexible labor market policies:** regulator may relax labor market rules for firms adopting this model to encourage more online job adoption

Pros:

- Perceived to be innovative, flexible and adaptable to the new labor requirement

Cons:

- May act against the interest of labor /workers/staffs as they may be on temporary contracts rather than permanent contracts.
- Flexibility to work from home may mean lower wages as well

**Subsidized upfront digital set up**

Pros:

- This may reduce the upfront tech startup costs and will be a big boost to encourage adoption of this model
- There will be no need to apportion the costs over the lifetime=> better and more affordable products

Cons:

- Successful adoption of this model means that the consumer must have access to internet and also, a computer. This may not be accessible in all parts of the world. Therefore, the take up may not be great.

**Mandate minimum /gradual scale up into virtual field:** regulator may mandate a gradual adoption of virtual business model over a defined time period across entire business spectrum.

**Pros:**

Compulsory nature of mandate means that everyone will have to accommodate this shift to virtual insurance and therefore, there will be a gradual and bidirectional learning curve for insurers across industry where each one would learn from the experience of those having introduced this concept before.

**Cons:**

There will be a transition cost that will have to be borne and insurance lobbies may resist this transition or push to make this virtual concept optional.

Market knowhow may not be available in the market to implement this virtual concept across the entire market.

Insurers would need to reexamine their internal processes and also, external relationships with intermediaries, sales and distribution channels etc.

Those insurers having spent a lot of funds in improving their offering and customer experience may face challenges as their sunk costs would be for a lost cause.

**Development of IT digital platform hubs by the regulator**

The regulator may lead the initiative by developing a master digital platform hub which is then used by insurers to embed their offering.

**Pros:**

This will enable a quicker adoption of the virtual model by incumbents and also, reduce their upfront cost of switching to such a system.

**Cons:**

The regulator will likely impose a fee for such a service which would need to be passed on to customers.

**Promotional campaigns, education awareness, seminars - both locally and internationally**

The regulator may lead an awareness and education campaign to explain the pros and cons of such initiatives.

The regulator may work with Government partners to encourage tech firms to invest and disrupt the system by chipping away into payer value proposition.

The regulator can encourage foreign direct investment and international expertise to bring their knowledge and expertise to set it up.

**Faster licensing (eg . single window clearance) and faster product approval****Pros**

Attractive proposition for the investors as the time to market will be short – so, the capital is effectively put into play quickly

**Cons**

Potential for quality being compromised for speed – not in the interest of policyholders

**[1.5 per main bullet; max 8]**

**iii) Requires clients to have access to internet and also a computer to be able to access product**

The insurer may not be able to target the poor segments or low-class workers who do not have access to the service.

**Mitigation:**

Target client may be solely the financial sophisticated client - who would have access to a computer and internet access

The insurer will have to develop sophisticated Apps which will improve reachability towards a greater mass.

Automatic kiosks may be set up in various places - a bit like automatic teller machines to encourage take ups.

**Lack of UW quality may lead to anti-selection**

The insurer may be anti- selected if the quality of UW is not as good as what other insurers are implementing. This may lead to poor risks coming into the pool and not being priced accordingly.

**Mitigation:**

Sophisticated algorithm /chatbots may be set up to improve adoption of automatic UW guidelines which would bridge the gap between simplistic and sophisticated UW.

**Cybercrime and security**

Being a virtual insurer means that the insurer will be prone to cybercrime and other security issues and also, hacking of confidential information.

**Mitigation:**

Investment in latest IT security protocols may be a good risk mitigant to deter crimes.

**Personal data issues**

There is a big risk of personal data information being collected and stolen over the wire.

**Mitigation:**

Enhancement of the latest data security protocols to prevent risk of data being intercepted over the course of a transaction.

**Lack of awareness about using online platforms/reticence especially among the old to use new business model****Mitigation:**

Enhanced education, training and also, awareness campaigns may be set up to guide members of the public (especially the least sophisticated) to adopt such a model

Prize bonanza may be set up to encourage referrals => aim to increase/boost sales

Explanation/awareness information available through contact centers etc.

**Operational risk (Systems /Processes/People)****Mitigations**

Adoption of an innovative and flexible target operating model to strengthen the framework around staff, IT, platform, data strategy, business strategy.

**Relationship with intermediaries and other stakeholders may be impeded with the adoption of virtual model****Mitigations**

Encourage intermediaries to adopt the virtual model to encourage sales and liaising with client

Encourage intermediaries to become business developers and probably, make people understand and use the virtual experience better.

**Lack of client touch => brand name**

A virtual model may mean that the insurer would fail to have the client touch that may be necessary.

**Mitigation:**

Virtual insurer may still employ business development people to liaise and engage with clients.

Online publicity and advertising would enable creation of brand name

Commitment to international climate protocols would be a good promotion to the virtual concept

**Insurer may have other lines of business => still be face to face or traditional business model on these other lines of business**

Insurers may have a challenge having to deal with two different business models

**Mitigation**

Insurer should ensure that it has premium base which is sufficiently large to recoup its upfront and ongoing costs => otherwise, it may not be able to recover its transition costs.

**Insurer may have international presence - which are still on traditional model**

Insurers may have a challenge having to deal with two different business models across different jurisdictions.

**Mitigation**

Insurer should ensure that it has premium base which is sufficiently large to make sure that there is economic merit in what it is doing.

**Insurer may have group business as principal driver of health business as opposed to individual business**

Group business is less prone to digitalization and virtualization

**IT upfront and development cost**

Insurer may underestimate the cost of incurring upfront IT development cost- especially if it is a novel concept.

**Mitigation:**

Adopt experienced consultants and project managers to enable a proper evaluation of the costs and implementation of the transition process.

[1.5 per major bullet; max 7]

**iv)****a) Group medical expenses Reimbursement for IP**

Compulsory participation – if dependents were to be covered all should be covered – to minimize UW requirements to make it well suited for the end-to-end online propositions

Set low annual limits and so lesser need for individual UW

“What is not covered” is made more explicit/ plain language and the policyholders understand those and sign up at the outset

Covering hospitalization for longer periods, say, 3+ days to avoid OP being present as IP

Offer wellness and disease management programs as part of the Group policy coupled with renewal premium discount based on performance – to engage with the employer as well as the employees

Cover expenses which are pre-authorized except in case of emergencies => otherwise, it should not be covered=> aim is to adopt claims control measures and ensure that claims outcomes remain in tight control space and so the low-cost proposition can be maintained

Only certain subcategories of IP services may be covered=> medically necessary; Not all IP may be provided=> discretionary, elective procedures may not be covered

Higher co-pay for outside the preferred provider network to discourage such utilization and so the claim processing speed is largely maintained

Yearly reviewable premium structure – so, pricing can be aligned as the experience emerges and risk profile of the group changes

[1 per point; max 5]

## b) Individual Lumpsum Critical Illness

Limit the number of illnesses covered to a minimum to keep it simple – perhaps consider illness specific products (eg. cancer only)

Illnesses are chosen so that they can be defined more objectively in terms of outcomes (eg. necessary to have a bypass surgery, organ replacement etc.) or stages (eg. Cancer) – to avoid any disconnect between insurance definitions and medical terminology

Underwriting to leverage any existing insurance experience (eg. claims from a medical reimbursement product of the consumer, general health check-up etc.)

Tailor product by varying the list of illnesses according to the target segment (eg. women, children etc.)

Limit the amount covered to minimize the need to undergo medical underwriting - Introduce a 6-12 months waiting period to minimize negative selection

Limited period premium guarantee (say, guarantee for first 3-5 yrs and reviewable thereafter) – there will be some level of experimentation here and so it is better not be locked in for a longer period

[1 per point; max 5]

## v) The statutory responsibilities typically revolve around the following areas

- Products are designed and priced right and comply with applicable regulations
- Policyholder reasonable expectations are considered in all aspects of doing the business
- Capital management to ensure the insurer remains solvent in reasonably stressed scenarios
- Periodic regulatory reporting of the insurer's financial condition
- Whistleblowing of any wrong-doings or unduly risk taking of the insurer
- Liability assessment – setting up reserves to meet future liabilities in a prudent manner
- Asset liability management – to ensure the insurer holds enough reserves and liquidity to meet claims as they fall due

[0.5 per point; max 3]

For the above, the AA would need to have good handle on data and information which would then mean clear understanding of the systems, processes and controls – there is a bit of learning curve here.

Fully virtual environment would imply several operational processes will be tweaked in order to achieve a balance between risks, efficiency and ease of doing business.

The AA will have to map out the current controls to the new ones and identify gaps and address them as effectively as possible and call out any residual risks. All the controls will need to be carefully tested and monitored.

Data and control implications of any system upgrades and process changes will need to be thought through beforehand and tested – this is more important in the virtual set-up than the traditional ones. You are putting things more on autopilot and so will need to be extremely careful.

AA and his team will need to fully understand the technology limitations and the impact that they may have on completeness/accuracy of data – to some extent the team will need to understand the key features and processes with respect to the technology platform used.

There are of course positive effects of this set up with no or limited manual intervention => better consistency in data/decision making

The model is more exposed to data privacy risks – so, AA will need to understand the implications and address them working with other professionals.

There is stuff new with technology advancing fast – so, AA and his team will need to be open learning the new technology as it evolves. So, there is additional effort involved here.

With respect to meeting PRE – virtual set up adds to the challenge of already intangible insurance product. AA will need to understand sure how the PRE dynamics change with the changes in sales and policy issuance processes and ensure they are managed well.

Cyber security risk needs to be monitored and back-up processes in place and so core data is not lost or manipulated.

Potentially increased exposure to fraud (both internal and external) needs to be well understood and controls put in place.

Motivating team may be challenging in a virtual environment – need to work with HR to ensure that there is regular connect and other HR policies that keep the team challenged and motivated.

[1 per point]  
**[Max 11]**  
**[42 Marks]**

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