Below is one example of problem statement of INSTITUTE AND FACULTY OF ACTUARIES. will contain its correct Answer and its Scenario also . To solve the question understanding of Scenario is must because scenario will helps you in understanding in solving the given problem statement in multiple ways.

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\*\*Problem Statement: \*\*

You are the advising actuary to the EBDS Employee Benefits Scheme.

The regulator has recently released the following statement:

Regulatory update: Duty of care to pension scheme members

Our current regulations mean that pension scheme members are provided with an annual statement of benefits that assumes they will continue to pay into their respective arrangement on the terms they have used to date.

Some schemes have flexibility in the level of contributions that the member and/or the employer will make. It is important that members are made aware of the implications of any changes they request, either temporarily or on a permanent basis, where this will adversely affect their financial future. Examples can include reducing the level of contributions or reducing other benefits such as medical or dental cover.

We are concerned that there has been an increase in pension scheme members reducing their contributions without being aware of the full consequences of their actions. We strongly encourage pension schemes to increase the transparency of these implications by reminding those that would be affected in a timely manner. Schemes should not directly offer advice but should encourage their members to always seek independent advice and appraisal of their personal circumstances.

We do not however intend to change our regulations regarding the preparation of annual statements at this time.

– End of update –

You met with the trustees on 21 March 2024 to discuss the operation of the pension scheme in light of the regulatory update. They wish to continue to support members and no changes to the scheme benefits are planned. They highlighted the following article in the Daily Communicator and other similar social media posts in recent months that have highlighted the option of reducing contributions as a means of dealing with the cost of living today. There is concern that some members may consider this as advice and this may have triggered some of the more recent transfers to the ‘low tier’.

\*Article from the Daily Communicator: 3 March 2024 \*

So, we are in the midst of a national economic crisis with the latest inflation figure now being over 8% and it is expected to reach double figures in the near future. So many are concerned about their personal finances, and budgets are at the forefront of most people’s minds. Cutbacks on fuel consumption, looking for cheaper food and generally spending less have become routine but little government support is forthcoming.

Employers are not helping as salaries are not keeping pace with inflation. So what else can you do?

One solution may be to pay less into your pension. If you cannot afford to live today, then perhaps saving for tomorrow shouldn’t be a priority. Reducing your pension contributions will give you money for today. Definitely something to consider!

After discussing the issue with you, the trustees wish to have a letter to give to all those who request a transfer to the low tier.

The letter to be issued by the trustees should include:

1. example data for a typical member on the financial impact of moving to the low tier.
2. what factors affect the actual fund at retirement.
3. a discussion of how other additional scheme benefits can be affected.
4. information that personalised illustrations can be made available but the trustees are unable to provide advice.
5. a reminder that a return to the ‘standard tier’ is possible at any time.

The trustees have told you that transfer will no longer be automatic on receipt of the request. Members will need to send an email to the Human Resource Director to confirm receipt of the letter and that, having read it, they still wish to make the change. This is an effort to protect employees and reduce any possible reputational risk to the trustees and the employer. Without this email, the change will not be implemented and this should also be made clear to those making the request.

\* Instruction to candidates \*

Remember that CP3 is a test of your ability to filter information and communicate it to a particular audience. Use only information that is contained in this examination paper and the scenario material provided. Do not draw on prior knowledge of a particular market, legislation or company.

\* 1 \* Draft the letter requested by the trustees, which will be given to any member

requesting a transfer to the low tier.

\* 2 \*

\* (i) \* Describe how you chose the data to include in your draft and give two

examples of data you chose to omit with reasons for their omission.

\* (ii) \* Describe how you chose to use and display the numerical data you considered relevant in your draft.

\* (iii) \* Explain how you chose to structure your answer so that it would be suitable for the member to fully understand all the implications of transferring to the low tier.

\* (iv) \* Give two examples of jargon used in the scenario material or question paper that the audience may not understand, and for each example explain how you overcame this in your document.

\*\*\*\*\* Problem Statement Ends Here \*\*\*\*

\*\* Scenario Material Of Question 1 \*\*

Everyday Building Design Solutions (EBDS) Limited is located in, and operates entirely in, Country X. EBDS employs architects, and the business started in 2015, at which time the EBDS Employee Benefits Scheme (EBDSEBS) commenced.

The following details are available:

Extract from the annual government report for Country X for 2023

1. Details of the EBDSEBS operated by EBDS
2. Membership data for EBDSEBS
3. Benefit statements
4. Recent trustee discussion at 7 March 2024.

\*1.\* Extract of the annual government bulletin for 2023 published January 2024

Economic conditions and outlook

The outlook for Country X remains bleak in the short to medium term. The country has been experiencing cost-push inflation and despite recent fiscal measures inflation remains a key concern. Details of historic rates are contained in the following table. Actual annual percentage inflation figures for 12 months ending:

Year March June September December

2019 2.8 2.9 3.1 3.0

2020 3.5 3.8 4.2 4.4

2021 4.8 5.1 5.2 5.5

2022 5.8 6.2 6.4 6.7

2023 6.9 7.3 7.5 8.2

The forecast is for the inflation rate to exceed 10% within the next 6 months.

The situation is caused in part by our high trade deficit. Conflicts not directly

involving Country X are creating difficulties in importing goods and there are severe

restrictions in our energy supplies. Domestically, recent droughts have led to poor

crops, which is exacerbating the cost of food due to lower supplies. Record-breaking

summer temperatures have occurred in 2023 and severe winters are predicted. These

extremes are attributed by the government to climate change, and we therefore expect

them to persist. The government is working hard to find solutions to sustain domestic

food production with subsidies being offered to farmers.

The average annual earnings inflation figure at 30 December 2023 was 7% so this

means that real disposable income is falling. This is causing increased hardship for

some sectors of the population.

\* Government spending \*

1. Pensions: the state pension will continue to be means tested and only those with total assets of less than $100,000 will qualify for a pension paid by the state. The current state pension, payable from age 60, is $100 per week and has been at this level since 2020. We remain committed to the philosophy that individuals should be self-sufficient in retirement, which is consistent with the country’s culture of saving for retirement. Participation in an employer pension scheme is therefore compulsory and the self-employed must have a private personal pension saving arrangement.
2. Healthcare: despite pressure to widen the provision of state-funded healthcare, only free state emergency hospital care will remain in place. There is an efficient and well-established market supplying private medical insurance to individuals with the option to add broader family cover.

\* 2 \* EBDSEBS

This is a defined contribution scheme into which employees are automatically

enrolled on joining the company.

The scheme has two membership tiers: standard tier and low tier. Members are

automatically placed into the standard tier but can request to move to the low tier at

any time.

Contributions are made by both the employer and employee and are invested in a

choice of two unit-linked funds. Only one fund may be used at any time, with

employee and employer contributions going into this fund.

On leaving service before retirement, the pension fund must be transferred elsewhere.

This may be to a new employer, or into an appropriate private personal pension

arrangement.

- Contributions -

Contributions vary by tier and are a percentage of basic salary according to the following table:

Contribution\_made\_by Standard (%) Low (%)

Employee 5 2.5

Employer 7.5 2.5

- Investment options and charges –

Fund Annual management charge(%) Plan fee per month(£)

Balanced ethical fund 2.5 2.75

Adventurous fund 3.25 3.00

All charges and fees are fixed. There are no charges on switching funds or transferring funds elsewhere.

Additional benefits

Additional benefits vary according to membership tier.

1. Death in service life cover

This is a multiple of total earnings in the 12 months up to date of death.

Tier Multiple

Standard 3

Low 1

The cost of this is paid entirely by the employer.

Medical underwriting only applies when a member of the low tier opts to rejoin the

standard tier. This means that the member will be required to have some level of

medical assessment on rejoining the standard tier. The cost of the assessment will

be paid for by the employer.

The level of assessment will vary according to the member’s basic salary at the

time of the transfer back to the standard tier. Those with a basic salary in excess of

$80,000 will have a physical assessment and those with a basic salary of $80,000

or lower will require a written medical report based on past medical treatment

only. Dependent on the results, death in service cover may remain at the level of a

low tier member but pension contributions will be as per the standard tier. The cost

of the cover will however still be paid by the employer.

On death in service, the member’s pension fund will also be available to the spouse

or other member nominated as a financially dependent relative.

1. Healthcare

Private medical insurance is paid for by the employer for members of the standard

tier only. This benefit ceases if the member opts to transfer to the low tier. On first

joining the standard tier there is no medical underwriting regardless of the earnings

of the member. An excess of $50 applies to each claim.

Members who rejoin the standard tier from the low tier are subject to medical

underwriting which will be a medical examination paid for by the employer. The

level of excess will increase to $100 of each claim and any pre-existing medical

conditions highlighted in the examination will be excluded from the cover. The

premium will still be paid by the employer.

- Retirement options –

Members can retire from age 60. The latest possible retirement age is 70.

At retirement, the members enter a drawdown arrangement that gives the member the freedom to take any amount at any time from their accumulated fund until the pot is exhausted.

\*3\* Membership data for EBDSEBS

The following data is taken from the scheme valuation at 31 December 2023. There

are 3,571 members and the age distribution is not expected to change significantly in the future.

The actual distribution by category is as follows:

Age\_band Standard\_tier(Death in service multiple 1) Standard tier((Death in service multiple 3)) Low tier(Death on service multiple 1)

18–25 3 285 18

26–35 15 613 27

36–45 241 1,562 113

46–55 123 494 52

56–60 3 18 4

The first request to move to the lower tier was actioned in 2019 and the number of

requests has been increasing sharply.

The average length of time in the low tier is currently 13 months. A survey of

members in the low tier was conducted in October 2022, asking how long they

expected to remain in this tier, and 71.3% do not expect to change before they retire

or leave service.

Choice of investment and overall fund split

The following shows the investment split between funds based on number of members:

Of the overall fund size by value, 51.75% is invested in the balanced ethical fund and 46.30% is invested in adventurous fund.

\* 4\* Benefit statements

Every year on 1 March, members receive a statement that contains their personal

details and relevant salary and earnings data. It shows their current investment choice, the amount currently in their pension fund and then a projected amount of their pension fund at retirement age 60 only.

This is a deterministic projection that allows for future salary growth and all charges.

It assumes no change in membership tier or change of investment fund. Economic

assumptions are reviewed annually. The projected funds are shown rounded down to thousands when included in the benefit statement.

It also contains their level of death in service life cover but has no reference to their

health benefits.

The economic assumptions for 2024 benefit statements are:

1. Basic salary growth rate: 7% p.a.
2. Fund growth:
3. Balanced ethical fund: 5% p.a.
4. Adventurous fund: 6% p.a.

\* 5 \* Recent trustee discussion: 7 March 2024

Trustees met following the publication of the annual benefit statements.

The Human Resources Director who is also Chairman of the Board of Trustees noted

that the number of employees requesting a transfer to the low tier was the highest it

had ever been. Transfers are actioned immediately on receipt of the request.

The trustees requested their advising actuary to perform some additional calculations

to allow the trustees to understand the impact on the average member of moving

between tiers. The examples show the impact on the projected retirement fund of the

member if they:

1. switch immediately into the low tier for a period of 12 months.
2. switch immediately into the low tier and remain there until retirement.

The projections assume a salary of $25,000 and an existing fund value of $10,000. All

other assumptions to be as per the 2024 basis and use the same method.

The results are tabulated below:

- Fund value (in $) at normal retirement age 60 for a member investing in the balanced ethical fund-

Number\_of\_future\_years\_in\_low tier Current\_age(40) Current\_age(45) Current\_age(50) Current\_age(55)

0 176,478.56 108,575.91 62,141.53 30,791.75

1 173,389.91 105,833.66 59,706.81 28,630.08

All 79,740.65 51,646.77 32,244.80 18,969.56

- Fund value (in $) at normal retirement age 60 for a member investing in the adventurous fund –

Number\_of\_future\_years\_in\_low\_tier Current\_age(40) Current\_age(45) Current\_age(50) Current\_age(55)

0 179,807.43 110,216.05 62,820.88 30,982.61

1 176,597.06 107,393.78 60,339.79 28,801.46

All 81,404.02 52,522.53 32,645.85 19,102.98

\*\*\*\* END OF SCENARIO MATERIAL \*\*\*\*\*

\*\* Correct Solution of Question 1 \*\*

The following is a solution that would have been awarded a pass. It is not intended to be a perfect solution and would not have gained full marks.

From: Trustees of EBDSEBS

<date>

Dear <>

Implications of moving to low tier of EBDS Employee Scheme

Thank you for your enquiry about moving from the Standard Tier to the Low Tier of the EBDS Employee Benefit Scheme. It is important to carefully consider your options as whilst you may return to the Standard Tier at any time in the future, moving to the lower tier has the potential to have a financial impact on your retirement. This letter explains the potential financial implications of this decision for a typical member as an example. A personalised illustration is available on request. There will also be changes to other benefits under the scheme which are also discussed. Finally, this letter details the actions you must take if you wish to make the change.

\* Impact on your pension \*

- Contributions -

The contributions you pay will reduce from 5% of your basic salary to 2.5% of your basic salary. Your employer will continue to pay into your plan. However, this will fall from 7.5% to 2.5% of your basic salary.

Annual contributions into a pension fund for a typical member earning $25,000 will therefore drop from $3,125 to $1,250. This is a reduction of $1,875 in contributions, and reduces the typical member contributions by $625 per year. If you request to move back to the Standard Tier at any time your contributions and that of your employer will resume at the higher level.

- How this impacts the pension fund at retirement -

All else equal, reducing contributions now will reduce the money available in your pension in retirement. The following table illustrates this for a member age 40 with an existing fund of $10,000 and a basic salary of $25,000.

Future Category Fund value at age 60 ($)

Remain in Standard Tier 176,000

Immediately move to Low Tier for 1 year only before reverting to Standard Tier 173.000

Switch to Low Tier until age 60 96,700

The figures are purely illustrative and the value of the fund at retirement will depend on factors such as salary increases and investment returns. These figures assume that salary increases are 7% per year and that the fund grows at 5% a year, and it allows for the fund charges.

Whilst a short period in the Low Tier may have a small impact, the longer the reduction continues the larger the impact is likely to be. In this case, continuing in the Low Tier until retirement would reduce the retirement funds by almost half, compared to remaining in the Standard Tier for this period.

Your actual figures will depend on your age, your current salary and growth in your basic salary and current and future fund choices. It also depends on actual fund performance and the retirement age you choose.

A more tailored illustration can be supplied to your own situation on request

\* Other benefits under the scheme \*

On moving from the Standard Tier to the Low Tier the additional benefits will also be affected

1. Death in service life cover – the payment made to your dependents on your death will reduce from 3 times your total earnings in the 12 months up to the date of death to 1 times your total earnings in the 12 months up to date of death
2. Private medical cover – private medical insurance will no longer be provided by your employer when you enter the Low Tier

When moving back to the Standard Tier in the future, there is no guarantee that you will be able to fully reinstate these benefits.

\* Moving back to the Standard Tier \*

You can choose to revert to the Standard Tier at any time. Your contributions will then return to 5% of your basic salary. The employer contributions will also revert to 7.5% of your basic salary.

However this does not automatically mean that your other additional benefits will return to their previous level:

1. For your life cover, enquiries will be made into your health, which will include a medical examination if your salary exceeds $80,000 before full cover will be given. It is possible that issues with your health mean that your cover will remain at the lower level of 1 times your total earnings in the 12 months up to the date of death
2. A medical assessment will be needed regardless of salary for your Private Medical Cover to be reinstated. Any existing medical conditions at that point in time may be excluded from your cover. For all claims, the initial amount you will need to pay will rise from $50 to $100.

\* Summary and Next Steps \*

You are able to move to the Low Tier but this has both short and longer term implications and should be carefully considered. The retirement figures above are an illustration for a typical member and are based on various assumptions. On request we can supply a more detailed projection based on your own circumstances. We cannot offer advice but you are encouraged talk through your options with an independent financial adviser. If you would like to go ahead and move to the Low Tier you will need to write to your human resource director, acknowledging receipt of this letter and state your wish to go ahead with the change. The change will not come into effect until you have done this.

Q2 part (i) *Describe how you chose the data to include in your draft and give two examples of data you chose to omit with reasons for their omission*

The question asks for the document to supply data only for a typical member and therefore I used the membership data table to choose which figures were appropriate. The 35-45 category has the most members and overall the average is roughly 40 therefore I felt this was the appropriate age to use. A member cannot participate in both funds therefore I chose the Balanced Ethical Fund because a slightly higher proportion were currently using this fund. Hence this combination would be most representative of a typical member. Further, the difference between the results for the funds is not large and I have told them that an exact illustration can be provided.

I used the scheme details in the response. I felt it important that the member be informed of the existing position and future position, rather than just the difference. Hence for the contributions I mentioned both the member and the employer as both participate and gave both the Standard Tier and Low Tier contribution.

I used both the projected funds at retirement assuming that the switch is permanent and also just for one year. This is because there is the option to revert to the higher tier at any time. This is not a benefit statement and therefore I felt I do not need to follow the regulation of supplying only the retirement figure.

I did not give explicit details of the charges of the fund as the focus is on the outcome. The change in tier will not impact the charges unless a fund switch arises which is out of scope for the discussion and will be a distraction to the reader.

I did not include details of what the State will provide as this will not change. It is also not within the control of the member and there is no guarantee this will stay constant in future. My emphasis was kept on what happens within the Scheme.

Q2 part (ii) *Describe how you chose to use and display the numerical data you considered relevant in your draft*

For the results of the retirement projection I chose a table. I used clear headings and included units - $ for the currency and years for the future length of time in the low tier. I made it clear that the monetary figures are for age 60. I felt it was clearer to do this than a bar chart where adding the specific figures may make it appear untidy and the differences, particularly for the one year projection may not be immediately obvious.

I calculated the percentage difference if a member stayed low tier to retirement and expressed it as almost half. ‘Half’ is very clear and a stark figure understandable by all. Using an exact figure would be superfluous accuracy and perhaps less impactful.

I rounded the retirement figures rather than using the precision in the exam material as these are projections based on assumptions so this avoids spurious accuracy. This is also consistent with the use of rounded figures in the benefit statements.

The percentage contributions were important and I included these as percentages. However I did a calculation to show what this meant in monetary terms as affordability is a key concept in this scenario.

Q3 part (iii) Explain how you chose to structure your answer so that it would be suitable for the member to clearly and fully understand all the implications of transferring to the Low Tier. (5)

I used an opening paragraph to set the scene. As this document will be issued in a response to an enquiry I acknowledged why the letter was written and stated the order of the remaining contents.

I needed to cover the Retirement situation and also the impact on other benefits and therefore did these in separate sections with clear titles. For emphasis I used bold type on the headers of main sections for example Impact on your pension to signify the section on the retirement pot.

As the retirement is the main purpose of the scheme I laid this out first.

Within the scheme there are two financial considerations : firstly what you pay and then what you get back. Hence I chose this as the order for subsections again clearly labelled eg using a subheader of ‘Contributions’ for what the member and employer pays. I talked about the member payment before what the employer pays as this may be more important to the reader though there is also an overall impact. Separating each change in contribution into separate sentences also helps clarity of message.

Equally within Other Benefits I needed to separate death in service from private medical cover and used clear bullet points to make it clear there are two separate impacts. Small identifiable blocks makes the material easier to read.

Having discussed the changes I needed to make the impact of changing back to the higher tier in future clear, and so used a separate section to cover this.

I then went on to the summary, ending with the next steps that the member needed to make to effect the change. This will ensure that the member considers their options, but comes away clear on what they need to do next.

Q4 part (iv) *Give two examples of jargon used in the scenario or question paper which would not be understood without explanation by the audience and for each example explain how you overcame this in your document (3)*

The material states a deterministic projection methodology is used. A projection was needed to be included in the response. However the readers do not need to know how the calculation was performed hence I excluded the method so as to not confuse the reader. I simply gave the figures and explained that this is what they may achieve on given assumptions.

The scenario refers to medical underwriting. The scheme member may not understand underwriting in this context. I therefore did not use it but explained that medical investigations would be needed to change tier back to the standard as this is a concept that is readily understand.

\*\*\*\* Answer Ends Here \*\*\*\*\*

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\*\* Problem Statement New:\*\*

\*\*Scenario New:\*\*

Give me detailed comphrenshive correct answer of above Problem Statement.