Chapter 8

Multiple-Choice Questions

1. **D**
2. **C**
3. **C**
4. **B**
5. **C**
6. **B**
7. **D**
8. **A**
9. **B**
10. **C**

Short-Answer Questions

Question 1

(a) May 2018 claim : (13,750 – 2,500) × (1 – 0.25) = RM 8,437.50
September claim: 5,600 × 0.75 = RM 4,200.00

(b) Amount Shazlina has to bear
= (13,750 + 5,600) – (8,437.50 + 4,200) = RM6,712.50

Question 2

(a) The value of human life method:
Use the Present Value of an Ordinary Annuity = PMT $\left[\frac{[1-(1+i)^{-n})}{i}\right]$

Substitute : n = 60 – 43 = 17 I = 5.5% PMT = 256,000 x 0.7 = 179,200
Solve for PV = RM 2,254,904

The estimated life insurance needed = RM 1,946,938

(b) The rule of thumb method:
Target income replacement = 0.7 × 256,000 = RM179,200
Estimated life insurance needs = 179,200 × 6 = RM1,075,200

(c) Suggested answers include:

- The value of human life method has been critiqued as being overly simplistic as it assumes that the net take home pay, dependents living needs and required return remains constant from now until retirement age which may not be realistic.

- The rule of thumb method suffers ignores the effects of inflation and assigns a subjective time period for family adjustment. It may be an overly simplistic approach

Question 3

(a) Since this cash need has a fixed time period, an endowment life policy would be suitable.
(b) Step 1: Estimate the annual costs in 16 years

Use the future value formula FV = PV $(1+i)^n$
Substitute : PV = 35,000 i= 5.2% n = 16
Solve for FV = 78,762.57

Step 2 : Calculate the total cost of education in 16 years
Use the Present Value of an Ordinary Annuity = PMT $\left[\frac{[1-(1+i)^{-n})}{i}\right]$
Substitute : n= 4 I = (((1+0.083)/(1+1.052))-1) x 100 = 2.9468% PMT = 78,762.57
Solve for PV = 329,251.57

Step 3 : Estimate the present value of the current insurance required

Use the present value of a lump sum formula: $PV = FV/(1+i)^n$
Substitute: FV = 329,251.57 i= 8.3 n = 16
Solve for PV = RM96,105.39
Note:
Discount rate should be 8.3% as the inflation has already indirectly been adjusted in Step 1 above

The estimated education insurance would be = RM96,105

Question 4
(a) Investment linked policy with a critical illness rider.
(b) Annuity life insurance plans

Question 5
Similarities:
- Both takaful and conventional insurance involve pooling of funds for risk management purposes.
- Available to all – Muslims and non-Muslims
- Offer similar products – life, medical and general insurance type policies. However, Takaful operators may offer additional hajj and Umrah policies.

Differences:

	Takaful	**Conventional insurance**
Concept	Co-operative policy Funds are considered donations from participants Based on Shariah principles	Legal contract Risk shifting from the insured to the insurer
Investment	Based on Shariah principles Rejection of speculative, gambling and usury related businesses	Any legal investments in equities, bonds and other financial instruments
Gains/Surpluses	Shared between participants according to a predetermined profit-sharing ratio	Dividends are returned to shareholders Bonuses to participating policies
No-Claims	Cash back may be available	No cash back

Discussion Questions

Question 1
Suggested answers include:
- Term insurance main purpose is to provide life protection only for a cheaper premium compared to endowment or whole life policies.
- Individuals can invest difference in premiums in investment that meets his/her choice/risk profile. It could provide more control on the investment portion to the individual.
- Cash value policies (e.g. endowment and whole life) may allow policy loans and non-forfeiture privilege.
- However, the loan taken reduces amount available for the beneficiaries upon death.
- Any other relevant answer.

Question 2
Suggested answers include:
- Cash value policies enable policy loans to be taken for automatic payment of premiums, children's education and other personal reasons. Policy loans bear interest rates.
- If the policyholder cannot keep up the premiums and the cash value is depleted, this will lead to forfeiture of policies which deny protection coverage and waste financial resources (contributed

over the years)
- Besides, cash value premiums are costly – not everyone can afford these costs.

There are many other ways to inculcate good savings practices besides paying premiums e.g. maintaining a separate retirement savings account with a standing instruction and to transfer excess above a pre-determined amount to fixed deposit accounts, invest in unit trust funds etc.

Question 3

	Life insurance	**Medical and hospitalisation insurance**
Coverage	Death, total permanent disablement and critical illness (basic policy or as a rider)	Hospitalisation and related medical treatment only
Type of contract	Valued contract	Indemnity contracts subject to annual and lifetime limits Payment upon submission of approved hospital claims. Claims cannot be more than the amount of billings presented.
Cash value	Yes, except for whole life	Not included
Tax relief	RM4,000 for life insurance premiums with effect from year of assessment 2019	Medical and together with education insurance premium tax relief applicable for self, spouse and children of RM3,000 per annum

Question 4

(a) Heart attack requiring major surgery is part of the 36 serious illnesses covered. He would be able to claim up to the amount of the valued contract in one lump sum, in this case RM180,000.

(b) Since all the claims are within the coverage limits:

Total claim	RM53,475
Less: Deductible	RM2,500
	RM51,475
Less: Co-insurance (20%)	(RM10,295)
Maximum claim to be paid by XLA	RM41,180

(c) Suggested answers include:
- Hospital and surgical insurance policies are renewable yearly. As such, unless there is guaranteed insurability, the insurance company may have the right to not renew insurance policies or apply higher renewal premiums in cases where there have been successful claims.
- Unless there is a multiple critical illness rider, Edwin will also not be entitled to claim for critical illness for a further similar heart problem or upon relapse.
- If Edwin were to buy a medical or critical illness policy with another insurer, the heart problem will have to be disclosed as a pre-existing condition and be excluded from coverage.
- Any other relevant answer.

Case Study

Question 1

Use the Present Value of an Ordinary Annuity = PMT $\left[\frac{[1-(1+i)^{-n})]}{i}\right]$

Substitute: PMT = 65% x 125,000 = RM81,250

i = [((1+0.07)/(1+0.05)) – 1} x 100 = 1.904 n= 20 years

Solve for PV of family living needs = RM1,340,845

A guaranteed annuity or reversionary annuity plan would pay Shanti being the nominee a regular fixed sum. Suitable for regular retirement income stream.

Question 2

Use the present value of a lump sum formula $PV = FV/(1+i)^n$

Substitute: FV = 240,000 i= 7 n = 6

Solve for PV of education fund = RM159,922

As a fixed lump sum is required at a fixed time in the future, an endowment fund would suit this purpose.

Question 3

Total life insurance needs

= Living needs + Jaspal's Education + Funeral Expenses + Debts

= 1,340,845 + 159,922 + 15,000 + 25,000 + 15,000 + 256,000 = RM1,811,767

Total available and disposable assets

= Total assets – (Condominium + Plantation land + Car)

= 1,780,000 – (456,000 + 352,000 + 48,000) = RM 924,000

Additional life insurance coverage required = RM 887,767

Question 4

Suggested answers include:

- If the husband and wife are employed, they should consider the extent of their group medical policy coverage for their job grade. As medical insurance is only covered based on an indemnity/reimbursement basis, they should only purchase additional coverage if the company's coverage is not adequate.
- They should consider their age, current health condition and lifestyle choices (smoking, drinking). Premiums will be higher with age of entry and any pre-existing condition and health risk factors.
- Different companies offer different packages of life cover and thus they need to review which of these best suits their needs and budget.
- The annual limits and lifetime limits required. The higher the limits, the higher the premiums.
- Deductions and co-insurance conditions. Self-insurance will reduce the amount of premiums.
- Any other relevant answer.