

FN241 class 9-10 review questions

Provide precise and concise responses to the following questions referring to theories, concepts, and frameworks as discussed in the class materials and the main textbook. For quantitative problems, demonstrate the process of calculation and clearly highlight your answers as appropriate. Write down your answers clearly so that the lecturer can read them easily.

Review questions

1. What are major characteristics of universal life insurance? How does variable universal life insurance differ from universal life insurance?
UL insurance has a number of distinguishing characteristics. These distinguishing characteristics include: unbundling of protection and savings components, considerable flexibility concerning premiums and face value, cash withdrawals permitted, and market-based interest rate paid on the savings.
VUL insurance possesses all of the characteristics of UL, but with 2 major exceptions. With VUL, the policyowner determines where the premiums are invested. Second, the policy does not guarantee a minimum interest rate on the cash value.
2. Explain the annuity principle. Why is it said that annuities are the opposite of life insurance?
Annuities pool the risk of excessive longevity in order to provide an income that cannot be outlived. Insurers are able to continue payments to those who live far beyond life expectancy. Life insurance and life annuities can be viewed as opposites, as one provides protection against the adverse financial consequences of premature death, while the other provides protection against the adverse financial consequences of excessive longevity.
3. Differentiate between:
 - a. Immediate and deferred annuities
 - b. The life annuity (no refund) settlement option and life annuity with guaranteed payments settlement option
 - a. *Immediate annuities begin to make payments to the annuitant in the period after the annuity is purchased. For example, a retiree may give a life insurance company \$50,000 in exchange for an immediate annuity and begin to receive payments from the life insurer in the following month. A deferred annuity begins more than one period after the premium was paid. For example, an annuity purchaser age 30 may pay premiums over 20 years, then stop paying premiums, and begin to receive payments back from the insurer at age 65.*
 - b. *A life (no refund) annuity has no special guarantees for the annuitant. Payments are made until the annuitant dies. If the annuitant dies after receiving only one or two payments, there are no refunds or guaranteed payments. A life annuity with guaranteed payments promises to make at least a specified number of payments. If the annuitant dies before receiving all 120 payments, the balance of the promised payments is paid to a beneficiary.*

4. Many countries have nonforfeiture laws that require the payment of a cash-surrender value when a cash-value policy is surrendered. Briefly explain the following nonforfeiture options that are found in a typical life insurance policy.
- (a) If a cash value policy is purchased, the policyholder pays more than is actuarially necessary for the life insurance protection. Thus if the insurance is no longer needed, the policyholder should get something back. This payment to a withdrawing policyholder is known as a cash surrender value. The cash values during the early policy years are relatively small, but over a long period, the cash values can be sizable. The policy can be surrendered for its cash value, at which time all benefits under the policy cease.
- (b) Under the reduced paid-up option, the cash surrender value is applied as a net single premium to purchase a reduced paid-up policy. The reduced paid-up policy is the same as the original policy, but the face amount is reduced.
- (c) Under the extended term insurance option, the net cash surrender value is used as a net single premium to extend the full face amount of the policy (less any indebtedness) into the future for a certain number of years and days. In effect, the cash value is used to purchase a paid-up term insurance policy equal to the original face amount (less any indebtedness) for a limited period.

Application questions

1. Life insurance policies have different characteristics. For each of the following, identify the life insurance policy that meets the description:
- a. A policy where the face amount of insurance increases if the investment results are favorable
- b. A policy that can be used to insure the human life value of an individual, age 35, at the lowest possible annual premium
- c. A policy that permits the policyholder to determine how the premiums are to be invested
- d. A policy that allows cash withdrawals for a down payment on a home or payment of college tuition
- a. The face amount of insurance under a variable life insurance policy will increase if the investment results are favorable. Variable universal life insurance and indexed universal life insurance are also acceptable answers.
- b. Decreasing term insurance equal to the individual's human life value can be used to insure the individual at the lowest possible annual premium.
- c. A variable universal life insurance policy allows the policyholder to determine how the premiums will be invested.
- d. A universal life policy allows cash withdrawals, such as a down payment on a home or payment of college tuition.
2. Richard, age 35, is married and has two children, ages 2 and 5. He is considering the purchase of additional life insurance. He has the following financial goals and objectives:
- Pay off the mortgage on his home, which has 25 years remaining
 - Accumulation of a sizeable retirement fund
 - Payment of monthly income to the family if he should die

- Withdrawal of funds from the policy when the children reach college age
- For each of the following life insurance policies, indicate which of the above financial goals, if any, could be met if the policy is purchased. Treat each policy separately.

- Decreasing term insurance
- Ordinary life insurance
- Universal life insurance
- Variable universal life insurance

a. Decreasing term insurance can be used to pay off the remaining mortgage balance; it can also be used to provide monthly income payments to his family. However, because term insurance has no cash values, decreasing term cannot be used to accumulate a retirement fund or to pay college expenses of the children.

b. Ordinary life insurance can be used to pay off the mortgage, to accumulate a retirement fund, and to pay monthly income payments to the family. The cash values could be borrowed to pay college expenses when the children reach college age. The policy could also be surrendered for its cash value to pay college expenses.

c. Universal life insurance can be used to pay off the mortgage, to accumulate a sizable retirement fund, and to pay monthly income to the family. In addition, universal life insurance allows cash withdrawals that could be used to pay college expenses.

d. Variable universal life insurance can be used to pay off the mortgage, to accumulate a sizable retirement fund, and to pay monthly income to the family. A variable universal life insurance policy also allows the withdrawal of funds that could be used to pay college expenses.

- Kent purchased a whole life policy. Some questions have arisen with regard to his coverage. Name the policy provision that Kent should review to clarify each of the following questions
 - When Kent purchased the policy, he lied about his family's health history. Kent wonders if his lie will prevent his beneficiary from collecting the face amount of the coverage when he dies.
 - Kent became distraught when his marriage and business failed simultaneously. He is considering killing himself, but wonders if his beneficiary will be permitted to collect the face amount of the policy if he takes his own life.
 - Kent is facing a liquidity crunch. He needs some cash, but he does not want to exercise a nonforfeiture option. He wonders whether his life insurance policy can help.
 - Kent discovered the premium was due 2 weeks ago. He wonders if the coverage is still in force.
 - The incontestable clause
 - The suicide clause
 - The policy loan provision
 - The grace period provision