Exam, January 24 2006 Student's name ....No ....

The following information applies to questions 1-3. An investor purchased a single crude oil futures contract at a price $50 per barrel. The contract controls the delivery of 1,000 barrels of crude oil. The initial margin is $5,000 and the maintenance margin is $4,000.

1) The value of the contract at purchase is
   a) 0 USD
   b) $5,000
   c) $45,000
   d) $50,000
2) The crude oil futures price falls to $49,5 per barrel at the end of the first day. The balance of the margin account after it is marked-to-market is
   a) $500
   b) $4,500
   c) $5,000
   d) $49,500
3) The crude oil futures price falls to $48,5 per barrel at the end of the second day. An investor receives a margin call for:
   a) $500
   b) $1,000
   c) $1,500
   d) $5,000.
4) The ...…..... derivatives account for about 80 percent of the notional amounts outstanding of all derivatives.
   a) currency
   b) stock and index
   c) interest rate
   d) OTC interest rate
5) The spot price of the underlying asset is $1000. The forward price of an off-market forward is $1050. The forward contract expires in 6 months. The risk-free interest rate is 5 percent. The market value for a long position is:
   a) –24,39
   b) –25,00
   c) 24,39
   d) 25,00
6) The spot exchange rate for U.S. dollars is PLN3,20. The market forward exchange rate is PLN3.19. Time to expiration is 90 days. Convention: a/360. The local risk-free interest rate is 4 percent. The foreign risk-free interest rate is 3 percent. The implied repo rate is:
   a) 1,7%
   b) 8,2%%
   c) 10.4%
   d) 11,1%
7) The spot exchange rate for U.S. dollars is PLN3,20. The market forward exchange rate is PLN3.19. Time to expiration is 90 days. Convention: a/360. The local risk-free interest rate is 4 percent. The foreign risk-free interest rate is 3 percent. To make an arbitrage profit you should …. .
   a) borrow local currency
   b) buy currency
   c) invest foreign currency.
   d) buy cheap currency forward.
8) The spot exchange rate for U.S. dollars is PLN3,20. The market forward exchange rate is PLN3.19. Time to expiration is 90 days. Convention: a/360. The local risk-free interest rate is 4 percent. The foreign risk-free interest rate is 3 percent. The implied forward exchange rate is:
   a) 3,18.
   b) 3,19.
   c) 3,21
   d) 3,23
9) The net payment in advance of the FRA transaction is discounted with the
   a) fixed FRA rate,
   b) risk-free rate (Treasury Bills)
   c) appropriate forward rate,
   d) appropriate floating rate.

10) The currency net short position is equal to $100 thousands. The futures contract size is $10,000. Time to expiration is 90 days. The local risk-free interest rate is 4 percent. The foreign risk-free interest rate is 3 percent. The delta-neutral hedge ratio should be:
    a) -0.50
    b) 0.50
    c) -0.998
    d) 0.998
11) The maturity of an interest futures contract is exactly 9 moths. The futures rate is closed to the .... rate.
    a) FRA 9x12
    b) FRA 3x6
    c) FRA 6x9
    d) FRA 3x9
12) A bank buys an IRS. The duration for the „fixed leg" is 3,78. The notional principal is $100 million. The fall of interest rates by 1 percentage point will cause …….. .
    a) increase in economic value of equity by $3.78 million
    b) decrease in economic value of equity by $3.78 million
    c) increase in economic value of equity by 0,0378 million
    d) decrease in economic value of equity by 1 million
13) In the case of a matched pair of IRS transactions the swap's dealer profit
    a) is realized at origination,
    b) depends on actual market forward rates,
    c) is realized during the life of transactions,
    d) depends on interest rate movement in the future.
14) The up-front fee receiver in an off-market swap will pay the fixed rate
    a) equal to the actual market swap rate,
    b) lower than the actual market swap rate,
    c) higher than the actual market swap rate,
    d) will not make any payments in the future.
15) When interest rates rise the economic (MTM) value of the swap for the fixed-rate receiver is …… .
    a) fixed and independent of interest rate movements
    b) positive.
    c) zero,
    d) negative.
16) An asset swap
    a) always increases duration,
    b) always decreases duration,
    c) does not influence duration,
    d) none of the above answers is correct.
17) The actual duration gap is positive. The required duration gap is zero. A bank should .... .
    a) buy IRS,
    b) sell IRS,
    c) buy interest rate futures,
    d) none of the above answers is correct.
18) Structured finance reduces .... risk.
    a) credit
    b) currency
    c) interest rate
    d) operational
19) Consider a three-year IRS with annual payments in arrears. The notional principal is $10 million. The fixed rate is 10 percent. The actual floating rate is 11 per cent, 12 per cent after one year and 9 percent after two years. The short will pay:
    a) $100.000 at the end of the second year,
    b) $100.000 at the end of the third year,
    c) $200.000 at the end of the second year,
    d) $200.000 at the end of the third year.
20) You expect increase in interest rate in the long run. The ……. is a appropriate position.
    a) long IRS.
    b) short IRS.
    c) short cap.
    d) long FRA.