EXAM, January 31, 2017 Student's name ....

1) The simple return for the portfolio is 17 per cent. The log return is equal to:
   a) 15,0%.
   b) 15,7%.
   c) 17,0%.
   d) 18,1%.
2) If the correlation coefficient between two assets is ____, then the two assets can be combined to form a zero risk portfolio.
   a) -1.
   b) 0.
   c) 0,5.
   d) 1.
3) Which of the following risk measures is not a sensitivity measure ?
   a) duration.
   b) currency gap.
   c) delta.
   d) gamma.
4) The price for a Eurodollar futures contract is 98,00. A _____ LIBOR forward rate is equal to ___.
   a) 3M, 2%
   b) 3M, 9,8%
   c) 6M, 6%
   d) 6M, 9,8%
5) The spot rate for one year is 10 per cent. The forward rate for the second year is 10 per cent. The two-year zero-coupon bond's price with a par value equal to 1 is:
   a) 0,80.
   b) 0,83.
   c) 0,89.
   d) 1,07.
6) Spot rate z_3 = 7 per cent. Spot rate z_2 = 8 per cent. The forward rate for a capital market instrument ${}_3f_2$ is:
   a) 5%.
   b) 8%.
   c) 9%.
   d) 11%.
7) What is the price impact of a 200 basis point decline in yield on a 20-year par bond. The bond price will
   a) rise by 200 basis points.
   b) drop by 200 basis points.
   c) rise by 2400 basis points.
   d) drop by 2400 basis points.
8) What is the price impact of a 200 basis points increase in yield on a bond with a modified duration 3 and convexity of 20 ?
   a) +0,56%.
   b) -0,56%.
   c) + 5,6%.
   d) - 5,6%.
9) A bank has 1000 PLN in assets with duration of 0,5. Duration of all liabilities and equity is 0,3. What is the impact on equity value if all interest rates fall 200 basis points ?
   a) + 4 PLN.
   b) - 4 PLN.
   c) + 40 PLN.
   d) - 40 PLN.
10) A bond price has increased from 1000 to 1001 as interest rate dropped by 2 basis points. Duration is approximately equal to:
   a) 2,5.
   b) –2,5.
   c) 5.
   d) –5.

11) In a plain vanilla interest rate swap, one party makes payments at a _____ rate and the other makes payments at a ____ rate.
    a) fixed, fixed
    b) fixed, floating
    c) floating, floating
    d) the Treasury rate, interbank rate
12) Swap pricing means to determine the …… rate at the start of the swap.
    a) fixed
    b) floating
    c) coupon
    d) spot
13) The duration of a five-year pay-fixed, receive floating is closest to
    a) -6
    b) -3
    c) 3
    d) 6
14) An off-market forward contract is established with a _____ value at the start.
    a) zero
    b) nonzero
    c) positive.
    d) negative.
15) A negative duration gap means that the bank is exposed to falling ….
    a) interest rates.
    b) spot exchange rates.
    c) forward exchange rates.
    d) book value of loans.
16) You manage a $100 million bond portfolio with a duration of 4 years. You wish to decrease the duration of the bond portfolio to 2 years. You should enter the swap to
    a) pay fixed rate and receive floating rate.
    b) receive fixed rate and pay floating rate.
    c) pay fixed rate and pay floating rate.
    d) receive fixed rate and receive floating rate.
17) A bank buys an IRS. The duration for the „fixed leg" is 2,8. The notional principal is $100 million. The rise of interest rates by 1 percentage point will cause …….. .
    a) increase in economic value of equity by $2.8 million
    b) decrease in economic value of equity by $2.8 million
    c) increase in economic value of equity by 0,028 million
    d) decrease in economic value of equity by 1 million
18) The forward bid exchange rate is equal to …. .
    a) spot bid + bid swap points/swap ratio
    b) spot ask + bid swap points/swap ratio
    c) spot bid + ask swap points/swap ratio
    d) spot ask + ask swap points/swap ratio
19) If the exchange rate value of the Polish zloty goes from US$0.33 to US$0.30, then
    a) The zloty has appreciated, and the Polish will find U.S. goods cheaper.
    b) The zloty has appreciated, and the Polish will find U.S. goods more expensive.
    c) The zloty has depreciated, and the Polish will find U.S. goods cheaper.
    d) The zloty has depreciated, and the Polish will find U.S. goods more expensive.
20) The PLN/USD spot is at 3, the one year PLN deposit rate is 6%, and the one year USD deposit rate is 3,25%. The one-year PLN/USD forward rate is:
    a) 2,92.
    b) 3,00.
    c) 3,08.
    d) 3,12.
21) The U.S. dollar currently trades at PLN 2,2. The U.S. risk-free rate is 2 percent, and the Polish risk-free rate is 6 per cent. The three-month currency forward is closest to
    a) 2,18
    b) 2,22
    c) 2,29
    d) 2,42

22) Consider a portfolio of 100M of governments bonds. The modified duration is five years, and the worst increase in yields observed over a month at the 95% level was 40 bp. The approximate portfolio monthly VaR at the 95% level is equal to ____.
    a) 0,4 M
    b) 2 M
    c) 4 M
    d) 95 M
23) A money market desk holds a floating rate note with an seven-year maturity. The interest is floating at three-month LIBOR rate, reset quarterly. The next reset is in one week. The approximate duration of the floating rate note is _______ .
    a) 7 years
    b) 3 years
    c) 3 months
    d) one week
24) To convert VaR from a one day holding period to a ten day holding period the VaR number is generally multiplied by:
    a) 1,65
    b) 2,33
    c) 3,16
    d) 10
25) A US Treasury bill selling for $96 with 120 days to maturity and a face value of $100 should be quoted on a bank discount basis at:
    a) 12,0%.
    b) 12,5%.
    c) 13,0%.
    d) 13,5%.
26) Which of the following are not related to operational risk ?
    a) fluctuations in exchange rates.
    b) errors in trade entry.
    c) errors in preparing Master Agreement.
    d) late confirmation.
27) The portfolio consists of A-rated bonds ($30 million) and B-rated bonds ($70) million. The one-year probabilities of default are 1 per cent and 5 per cent respectively. The recovery rates are 70 per cent and 30 per cent respectively. The expected credit loss from this portfolio is $____ million.
    a) 1,26
    b) 2,54
    c) 3,12
    d) 4,16
28) Market value of assets is 1000, long term debt is 200, equity is 300, volatility of ROA is 5%. Distance to default is equal to:
    a) 2.
    b) 3.
    c) 4.
    d) 8.
29) Credit quality is NOT measured by:
    a) credit ratings.
    b) credit spreads.
    c) default probabilities.
    d) credit provisions.
30) Recovery rates _______ during recession and ______ during expansion.
    a) increase, decrease
    b) decrease, increase
    c) are relatively stable in time.
    d) do not depend on macroeconomic situation.