

## Finance and Investment Management Olympiad Round One

### MEMORANDUM

1. The financial system is made up of different components. Which of the following is NOT a component of the financial system?

- I Financial Instruments
- II Financial markets
- III Lenders and borrowers
- IV Price discovery

- A I and II
- B I, II and III
- C IV
- D All above the above

2. Which of the following is TRUE regarding financial exchanges?

- A A financial intermediary that manages funds on behalf of principals
- \*B Allow broker-dealers to facilitate trading in securities
- C Analyse relevant financial and economic data pertaining to the issuers of securities and assign ratings
- D regulate and supervise all players in the financial system

3. The central bank of South Africa (SARB) does all of the following except

- A has the jurisdiction to set and implement monetary policy
- \*B maintains stability within the industry and protects financial consumers
- C controls domestic interest rates
- D manages and governs the financial services sector

4. Which of the following is NOT part of the 'Professionalism' standard of professional conduct?

- A Independence and Objectivity
- B Knowledge of the law
- C Misrepresentation
- \*D Record retention

5. Which of the following is NOT part of the 'Duties to clients' standard of professional conduct?

- \*A Communication with Clients and Prospective Clients
- B Fair Dealing
- C Preservation of confidentiality
- D Prudence and Care

6. If you invest R100 at a 20% annually compounded interest, what will its value be after three years?

- \*A 172.80
- B 100
- C 160
- D None of the above

7. Bear Visagie has just renewed his contract with the Tornado's rugby club for an annual payment of R6 million per year for the next 5 years. The Mail & Guardian reports the contract value as R30 million. If the discount rate is 12%, what is the true present value of the contract?

- A R38,117,084
- B R30,000,000
- \*C R21,628,657**
- D R17,022,806

8. You are quoted an interest rate of 12% compounded monthly. What is the effective rate of interest?

- \*A 12.68%**
- B 11.39%
- C 12%
- D None of the above

9. If you invested R998 today over a period of 6 years, how much will it be worth if you could earn a rate of 10.5% compounded annually?

- A R1 049
- B R1 052
- \*C R1 817**
- D R1 315

10. You are promised an amount of R70 000 in 4 years' time. Currently you could earn 7% interest compounded monthly. What is the amount worth today?

- \*A R52 498**
- B R53 403
- C R68 390
- D R52 948

11. John Abbot bought a house 15-years ago for R600 000. He is hoping to sell the house within the next couple of months and wants to get a general idea of what it might be worth today. He reads an article which states that house prices have increased by approximately 5% per annum over the past 15-years. Based on this John should expect to receive approximately:

- A R1 430 000
- B R640 000
- \*C R1 250 000**
- D R1 100 000

12. You need R2 000 000 in 20 years' time. You are willing to place a once-off amount of R200 000 into an investment. How much interest should you earn in order to reach your objective?

- A 10%
- B 11%
- C 16%
- \*D None of the above**

13. Calculate the future value of R1 000 for 2 years at 15% p.a. quarterly compounded

- A 1030
- \*B 1342.47
- C 1300
- D 1000

14. You want to buy a car for R50 000. If you have R10 000 to invest today at 11%p.a., approximately how many years will you have to wait before you can afford to buy the car?

- A 5 years
- B 7 years
- C 10 years
- \*D 15 years

15. Which of the following is NOT a day count convention?

- A Actual/360
- B Actual/365
- C Actual/Actual
- \*D All of the above are day count conventions

16. A bank is offering interest at 7.5% p.a. If you deposit R500 in the bank today and the bank pays simple interest, how much interest will you have earned in 2 years?

- \*A R 75.00
- B R77.80
- C R37.50
- D R155.00

17. If you placed R200 into a savings account that paid a compound interest rate of 6% per year that was guaranteed, what amount would you have in the account at the end of the first year? Ignore transaction costs.

- A an amount less than R206
- B exactly R212
- C an amount more than R206
- D unable to determine as you need more information

18. If you want to accumulate R18 000 in 8 years' time, how much must you deposit in an account today if the account pays interest at 9%p.a.?

- A R9 638.58
- B R9 045.23
- \*C R9 033.59
- D R9 134.

19. What is the future value of R3 500, deposited for 12 years at 5%p.a. compounded semi-annually?

- A R6 285.50
- B R3 679.07
- C R5 709.94
- D R6 330.54

20. Given the following information: CPI is expected to be 6%, the nominal risk free rate is 8.7%, the market consensus on the stock market premium is 5%, calculate the required rate of return be?

- A 20.22%
- B 15.22%
- \*C 13.7%
- D 8.7%

21. Which of the following is/ are considered to be a financial market:

- A Equity
- B Commodities
- C Derivatives
- \*D All of the above

22. Which of the following are considered to be the functions of the secondary market?

- I Price discovery
- II Implementation of monetary policy
- III Issuing new securities
- IV Liquidity

- A I, III and IV
- B II and III
- \*C I, II and IV
- D all of the above are functions

23. These instruments are required to be rated by one or more rating agencies before any investor will consider them

- A NNCD's
- \*B Bonds
- C Preference shares
- D Central bank securities

24. Which of the following are characteristics of preferred stock?

- I May have no maturity date
- II May be redeemable at the option of the issuer
- III It gives the holder the right to dividends and capital over ordinary shareholders
- IV Dividends on preferred stock is fixed-rate

- A II and IV
- B I, II, and III
- C I and III
- \*D All of the above

25. In the forex market two types of transactions can take place, spot and forward. What does forward mean?

- \*A Pay at a date in the future other than spot
- B Pay now
- C Pay tomorrow
- D Pay at a future date, usually after one year

26. The value of a derivative security \_\_\_\_\_.

- A is unable to be calculated
- B is unrelated to the value of the related security
- \*C depends on the value of the related security
- D has been enhanced due to the recent misuse and negative publicity regarding these instruments

27. A call option allows the buyer to?

- A sell the underlying asset at a predetermined price on or before the expiry of a specified period
- \*B buy the underlying asset at a predetermined price on or before the expiry of a specified period
- C sell the option in the open market prior to expiry of a specified period
- D swap payment obligations with another counter-party

28. Real investments differ from financial assets in that they:

- I Can be used as an inflation hedge
- II have liquid markets
- III Incur storage and insurance costs
- IV Can have high transaction costs

- \*A I, III, IV
- B I, II
- C II, III, IV
- D I, IV

29. Which of the following is NOT considered to be a hard commodity?

- A Alloys
- B Oil
- \*C Pigs
- D Palladium

30. Which of the following is considered to be an alternative investment instrument:

- \*A Hedge funds
- B Property unit trusts
- C Retirement funds
- D Exchange traded funds

31. What is the price of a 182-day Treasury Bill with a discount rate of 9.5% and an nominal value of R1000?

- A R951.97
- \*B R952.63
- C R952.76
- D R953.41

32. If you want to buy a 3 year zero coupon with a yield of 6.5%p.a. and a face value of R100, how much would you need to have available today?

- A R82.41
- B R82.45
- C R82.53
- \*D R82.78**

33. An economist will define the exchange rate between two currencies as the:

- \*A Amount of one currency that must be paid in order to buy one unit of another currency.**
- B Difference between total exports and total imports in a country.
- C Price at which the sales and purchases of foreign goods takes place.
- D Ratio of import prices to export prices in a country.

34. If the current \$/R exchange rate is 0.0700413, how much would it cost you to buy \$1?

- A R7.00
- \*B R14.27**
- C R70.04
- D R142.77

35. If the current R/£ exchange rate is R20.23 and the bank charges you R20.55, calculate the conversion spread.

- \*A 1.1369%**
- B 1.1192%
- C 3.8557%
- D 3.7956%

36. The current R/€ exchange rate is R16.1430. If the current R/£ exchange rate is R20.23, what the £/€ exchange rate?

- A 0.7855
- B 0.7980
- \*C 1.2532**
- D 1.2730

37. If the interest rate that you receive from an investment account is 6.5% per year and inflation is 4% a year. The amount of money in terms of purchasing power that you would have in the account after one year, would be?

- A exactly the same amount of money.
- B less money in one years' time in terms of purchasing power when taking inflation into account.
- \*C more money in one years' time in terms of purchasing power when taking inflation into account.**
- D unable to determine.

38. The objective of an investment is to:

- A Guarantee your original investment.
- \*B Increase the amount of your original investment by earning income and generating capital gains.
- C Decrease the amount of your original investment by losing income and generating capital losses.
- D Speculate with your money.

39. All of the following statements regarding portfolio management are true *except*?

- A It is the ongoing decision-making in respect of the allocation of funds between different asset classes.
- B It is a balance between risk and return.
- \*C It is not based on in-depth market research.
- D Decisions involve choosing specific assets with asset classes.

40. The risk free rate is the rate that is earned on?

- A Corporate bonds
- \*B Government bonds
- C Commercial Paper
- D Zero coupon bonds

41. If the required rate of return on a 5 year investment is 7% and the risk free rate is 5%, then the investment's risk premium equals?

- \*A 2%
- B 5%
- C 7%
- D 12%

42. All of the following are macroeconomic influences on economic environment *except*?

- A Taxes
- B Interest Rates
- \*C Market Size
- D Currency Exchange Rates

43. The two broad sources of risk for investments are?

- \*A Market risk and unsystematic risk
- B Systematic risk and market risk
- C Security-specific risk and financial risk
- D Business risk and financial risk

44. You bought a share last year for R100 and you received dividends of R5. If you just sold the share for R115, what is your holding period return (HPR)?

- A 5%
- B 10%
- C 15%
- \*D 20%

45. If your HPR for a 5-year investment is 25%, what is your annualized HPR?

- \*A 4.50%
- B 4.75%
- C 5.00%
- D 5.25%

46. Which of the following is the most volatile of all the asset classes?

- \*A Shares
- B Property
- C Bonds
- D Money Market



47. The average return for the share is?

- \*A 8.0%
- B 10.5%
- C 15%
- D 25%

48. What is the historical standard deviation for the share?

- A 10%
- B 15%
- \*C 17%
- D 20%

49. Which of the following is not a component of security specific risk?

- A financial risk
- B business risk
- \*C inflation risk
- D liquidity risk

50. What is the official current unemployment rate in South Africa?

- A 7.4%
- B 19.2%
- \*C 24.5%
- D 32.9%

51. The beta of the market is?

- A -1.0
- \*B +1.0
- C +0.5
- D unable to determine

52. If a portfolio is made up of 60% equities which earn a return of 10% and 40% bonds which earn a return of 4%, what is the portfolio's return?

- A 7.0%
- \*B 7.6%
- C 6.6%
- D 5.8%

53. A portfolio has 50% invested in equities and 50% invested in bonds. If the standard deviation of equities is 19.3%, the standard deviation of bonds is 11.6% and the covariance between equities and bonds is 1.42%, what is the standard deviation of the portfolio?

- A 1.98%
- \*B 14.06%
- C 16.15%
- D 17.33%

54. Correlation refers to:

- A the causal relationship between two variables.
- \*B the association between two variables.
- C the proportion of variance that two variables share.
- D none of the above.

55. If the covariance between equities and bonds is 1.56%, the standard deviation of equities is 25.4% and the standard deviation of bonds is 11.6%, determine the correlation between equities and bonds.

- \*A 0.53
- B 0.63
- C 0.48
- D cannot be determined

56. To achieve maximum diversification in a two-asset portfolio, investors should choose assets with a correlation of:

- A -0.5
- \*B -1.0
- C 0
- D +1.0

57. Which financial statement displays the revenue and expenses of a company for a period of time?

- \*A Income statement
- B Balance sheet
- C Cash Flow statement
- D Statement of Shareholder's Equity

**58. Economics is the study of:**

- A production technology
- B consumption decisions
- \*C how society decided what, how and for whom to produce
- D the best way to run society

**59. The accounting equation may *not* be expressed as?**

- \*A  $\text{Equity} = \text{Liabilities} - \text{Assets}$
- B  $\text{Assets} = \text{Liabilities} + \text{Equity}$
- C  $\text{Liabilities} = \text{Assets} - \text{Equities}$
- D  $\text{Non-current assets} + \text{Current asset} = \text{Total liabilities} + \text{Equity}$

**60. Who is the current Minister of Finance in South Africa?**

- A Trevor Manuel
- \*B Pravin Gordhan
- C David van Rooyen
- D Nhlanhla Nene