

# 2021 UJFIMO

## Finance and Investment Management Olympiad Paper

### 1

---

#### MEMO

Questions: 60 multiple choice questions

---

1. What does beta represent?
  - a. Equity risk premium
  - b. Market risk
  - c. Individual company risk against market risk\*
  
2. Liquidity is:
  - a. the ease with which an asset can be sold.
  - b. the ease with which an asset can be sold and the ability to sell an asset for a fair price\*
  - c. the degree of inflation protection an asset provides.
  
3. Which of the following is NOT part of the 'Professionalism' standard of professional conduct?
  - a. Independence and Objectivity
  - b. Misrepresentation
  - c. Record retention\*
  
4. Investment analyses and recommendations must be based upon:
  - a. reliable, up-to-date evidence, not prejudgments.\*
  - b. certainty, not scenarios or projections.
  - c. original research, not secondary sources.
  
5. Which of the following does not form part of the fundamental principles of the code of ethics
  - i Integrity and Objectivity.
  - ii Professional Competence and Due Care.
  - iii Confidentiality.
  - iv Due Diligence.
  - a. \*iv only
  - b. i and ii
  - c. All of the above
  
6. The professional standard of professional conduct does not entail the following
  - a. Knowledge of the Law.
  - b. Independence and Objectivity.
  - c. \*Material Non-public Information.
  
7. Duties to clients include:
  - i Prudence and Care.
  - ii Fair Dealing.
  - iii Preservation of Confidentiality.
  - iv Confidentiality
  - a. \*i, ii, iii
  - b. ONLY ii and iv
  - c. All of the above

8. Which of the following trades is not considered as spot market trading?
- A South African investor exchanges cash for gold on spot gold market due to his worry of prospects of a potential rand devaluation.
  - \*John collects and analyses information on securities then buys those he considers undervalued and sells those he considers overvalued.**
  - XYZ Limited trades in the foreign exchange market to convert money from euros to dollars.
9. Which of the following is not a major type of derivative
- Forwards
  - \*Prices**
  - Swaps
10. What is the purpose of using the financial system?
- To collect money on behalf of clients.
  - \*To raise equity capital.**
  - For financial markets to perform better.
11. Which one of the following does not form part of market mechanism.
- Systems
  - Conventions that exist to facilitate the issue and trading of shares.
  - \*Investor manifestos for prospective clients.**
12. In which market do Central banks influence liquidity?
- \*Secondary**
  - Primary
  - Tertiary
13. What is the name for the Central Bank in South Africa?
- South African Reserve Bank
  - South African Central Bank
  - \*South African Revenue Reserve Bank.**
14. How does the Central Bank influence money supply in the banking sector?
- Buying and selling shares of state owned enterprises.
  - \*Open market operations.**
  - Buying derivatives only in favor of the domestic currency
15. Over the counter markets are
- Not legislated
  - Not formalized
  - \*All of the above.**
16. Which of the following do not define the Capital Market
- Market for long-term capital.
  - \*Market for short-term capital**
  - Market for permanent funding
17. What is the main function of the financial markets?
- Provide goods from foreign countries
  - \*provide channels for transferring the excess funds of surplus units to deficit units**
  - Provide channels of cross industry communication.

18. What is the expected relationship between risk and return?
  - a. It is evident that the relationship is positive
  - b. **\*The return required increases as risk increases**
  - c. All of the above.
  
19. If investors were risk seeking the Capital Market Line would
  - a. **\*Negatively sloped.**
  - b. Positively sloped.
  - c. At some point negatively sloped and other points positively sloped.
  
20. In the domestic economy what would lead to a change in the money supply.
  - a. Domestic bank credit.
  - b. Foreign bank credit extension
  - c. **\*All of the above.**
  
21. Which is not the underlying factors of balance sheet causes of changes
  - a. Actual demand for credit
  - b. Interest rates
  - c. **\*Expectations regarding general elections.**
  
22. What does the standard deviation measure.
  - a. **\*The amount of variation in the returns of shares.**
  - b. The most expensive return of a security
  - c. The lowest price of a security.

You have been given this probability distribution for the holding-period return for KMP stock: This information should be used for the next three questions.

<u>State of the Economy</u>	<u>Probability</u>	<u>HPR</u>
Boom	.30	18%
Normal growth	.50	12%
Recession	.20	- 5%

23. What is the expected holding-period return for KMP stock?
  - a. **\*10.40%**
  - b. 9.32%
  - c. 11.63%
  
24. What is the expected standard deviation for KMP stock?
  - a. 6.91%
  - b. **\*8.13%**
  - c. 7.79%
  
25. What is the expected variance for KMP stock?
  - a. **\*66.04%**
  - b. 69.96%
  - c. 77.04%
  
26. The risk premium for common stocks:
  - a. Is negative, as common stocks are risky.
  - b. **\*Cannot be zero, for investors would be unwilling to invest in common stocks and must always be positive, in theory.**
  - c. Cannot be zero, for investors would be unwilling to invest in common stocks and is negative, as common stocks are risky.

27. You purchase a share of BitCash stock for R90. One year later, after receiving a dividend of R3, you sell the stock for R92. What was your holding-period return?
- a. 3.33%
  - b. \*5.56%
  - c. 5.91%
28. In words, the real rate of interest is approximately equal to
- a. \*The nominal rate minus the inflation rate.
  - b. The inflation rate minus the nominal rate.
  - c. The nominal rate times the inflation rate.
29. The holding-period return (HPR) for a stock is equal to
- a. The real yield minus the inflation rate.
  - b. The nominal yield minus the real yield.
  - c. \*The dividend yield plus the capital gains yield.

You have been given this probability distribution for the holding-period return for Ushaka Inc. stock:

State of Economy	Probability	HPR
Boom	0.20	24%
Normal Growth	0.45	15%
Recession	0.35	8%

30. Assuming that the expected return on Ushaka's stock is 14.35%, what is the standard deviation of these returns?
- a. 4.72%
  - b. 6.30%
  - c. \*5.74%
31. An investor purchased a bond 45 days ago for R985. He received R15 in interest and sold the bond for R980. What is the holding-period return on his investment?
- a. 1.52%
  - b. 0.50%
  - c. \*0.94%
32. The minimum rate of return that an investor must receive in order to invest in a project is *most likely* known as the:
- a. \*required rate of return.
  - b. real risk free interest rate.
  - c. inflation rate.
33. Jabulani wishes to compute the effective annual rate of a financial instrument with stated annual rate of 22% and compounded on a quarterly basis? Which of the following is most likely to be closest to the effective annual rate?
- a. 23%.
  - b. \*24%.
  - c. 25%.
34. How much amount should an investor deposit in an account earning a continuously compounded interest rate of 8% for a period of 5 years so as to earn R2, 238?
- a. \*R1500.
  - b. R1523.
  - c. R1541.

35. Your client invests R2 million in a security that matures in 4 years and pays 7.5 percent annual interest rate compounded annually. Assuming no interim cash flows, which of the following will most likely be the value of the investment at maturity?
- R2.150 million.
  - R2.600 million.
  - \*R2.671 million.**
36. Douglas Ramaphosa invests R3 million in a bank that promises to pay 4 percent annual interest rate compounded daily. Assuming 365 days in a year, what will be the value of Donald's investment at the end of one year?
- R3.003 million.
  - \*R3.122 million.**
  - R3.562 million
37. Which of the following is most likely to increase as the frequency of compounding increases?
- Interest rate.
  - Present value.
  - \*Future value.**
38. Ms. Shilowa is buying a house. She expects her budget to allow a monthly payment of R1500 on a 25-year mortgage with an annual interest rate of 6.8 percent. If Shilowa makes a 10 percent down payment, the most she can pay for the house is closest to:
- R216, 116.
  - \*R240, 129.**
  - R264, 706.
39. A consumer takes out a loan with monthly payments of R500 for a period of four years with first payment made today. Assuming an annual discount rate of 3.5%, compounded monthly, the present value of the loan is closest to:
- R22, 038.74.
  - R22, 365.36.
  - \*R22, 430.59**
40. Sihle Bengu plans to deposit R24, 000 into her retirement account at the end of every year for the next 15 years. The account will earn 12 percent every year. Assuming she does not make any withdrawals, how much money will she have at the end of 15 years after the last deposit?
- \*R894, 713.**
  - R1, 094,713.
  - R1, 294,713.
41. Your client is evaluating between the following two retirement options:
- Option 1: Pays a lump sum of R2.5 million today.
  - Option 2: A 25-year annuity at R180, 000 per year starting today.
- If your client's required rate of return is 6 percent per year, which option must he choose based on a higher present value?
- \*Option 1 as it has a greater present value.**
  - Option 2 as it has a greater present value.
  - Either of the two options as they have an equal present value.
42. John Botha wants to save for his daughter's college tuition. He will have to pay R50, 000 at the end of each year for the four years that her daughter attends college. He has 8 years until his daughter starts college to save up for her tuition. Using a 7% interest rate compounded annually, the amount Anderson would have to save each year for 8 years is closest to:
- R22, 000.
  - R18, 500.
  - \*R16, 500.**

43. Bill Gordan is planning to buy a security which pays a dividend of R100 per year indefinitely, with the first payment to be received at  $t = 4$ . Given that the required rate of return is 10 percent per year compounded annually, how much should Gordan pay today for the security?
- R683.
  - \*R751.**
  - R1, 000.
44. Pumzile Dube plans to buy a car worth R42, 000 today. She is required to pay 15 percent as a down payment and the remainder is to be paid as a monthly payment over the next 12 months with the first payment due at  $t = 1$ . Given that the interest rate is 8% per annum compounded monthly, which of the following is most likely to be the approximate monthly payment?
- \*R3, 105.**
  - R3, 654.
  - R3, 921.
45. How long will it take an investment of R2, 500 to grow three times in value to R7, 500?
- Assume that the interest rate is 6 percent per year compounded annually.
  - 11.9 years.
  - \*18.9 years.**
  - 21.3 years.
46. Which is true about price discovery
- \*Making of the price of equity and the price of money**
  - Discovering the long run interest rate
  - Making the price of goods to be equal in an economy
47. How do banks create money when required
- \*Setting different interest rates between lenders and borrowers**
  - Print new money
  - Sell products within the economy
48. Which category does not form part of the ultimate lenders in an economy
- Households
  - Government
  - \*Regulators**
49. Which intermediary does not facilitate the transfer of funds and securities
- Broker-Dealer
  - \*Regulators**
  - Households
50. What is the role of credit rating agencies?
- \*Analyse relevant financial and economic data pertaining to the issuers of securities and assign ratings to the securities reflecting the probability of the issuers meeting their financial obligation**
  - Regulate and supervise all players in the financial system
  - Allow the broker-dealers to facilitate trading in securities
51. Which of the following is not a market form
- OTC
  - Exchange traded
  - \*Cross exchange market**
52. Which entity is usually the sole broker to the government?
- Commercial Banks
  - \*Central Bank**
  - Corporations.
53. Non-negotiable certificates of deposit issued by banks are usually
- long-term
  - \*short-term**
  - perpetual

54. Which form do non-negotiable certificates of deposit not come in
- a. Call deposits
  - b. Fixed deposits
  - c. \*Taxing deposit
55. In the primary market the issuer receives funds, whereas in the secondary market the original issuer does not receive funds
- a. \*True
  - b. False
  - c. Not enough information specified.
56. Which does not form part of the economic function of the secondary market
- a. \*Regulation
  - b. Price discovery
  - c. Implementation of monetary policy
57. The issuer is able to borrow at a lower cost than in the absence of liquidity
- a. \*True
  - b. False
  - c. Not enough information specified
58. In which market can one access permanent debt?
- a. \*Capital market
  - b. Short market
  - c. Distressed market
59. Which of the following characteristics are not true for preference shares
- a. They have no maturity
  - b. Impart prior right to ordinary shares
  - c. \*Are less attractive than ordinary shares
60. What is the organisation that deals with South Africa's fiscal policy called?
- a. \*National Treasury
  - b. Reserve Bank
  - c. Policy research department.