

**DEPARTMENT OF HUMANITIES AND SOCIAL SCIENCES  
INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR**

**INTERNAL CLASS TEST 1: AUTUMN-2022  
PAPER HS60009: FINANCIAL MANAGEMENT**

Max Marks: 40

Date: 14/09/2022

**GENERAL INSTRUCTIONS**

- ✓ Answer all the questions.
- ✓ Time is 90 minutes.
- ✓ Non-programmable calculators and PV/FV tables can be used.
- ✓ Any kind of discussion and consultation during the exam is strictly prohibited.

**Name:**

**Roll No.**

1. Consols are also called as

- (a) Pure discounts bonds
- (b) Zero-coupon bonds
- (c) Perpetual bonds
- (d) Bond with maturity

**Answer:** (                      )

2. Danielle Caravello will receive a four-year annuity of \$500 per year, beginning at date 6. If the interest rate is 10 percent, what is the present value of her annuity?

- A. \$849.13
- B. \$894.13
- C. \$984.13
- D. \$948.13

**Answer:** (                      )

3. Which of the following is not a part of Discounted Cash Flow (DCF) criteria-

- (a) Accounting rate of return
- (b) Net present value
- (c) Profitability index
- (d) Internal rate of return

**Answer:** (                      )

4. Suppose you are considering purchasing a new truck for your plumbing business. This truck will increase revenues \$50,000 and operating expenses \$30,000 in the next year. Depreciation and amortization charges for the truck will equal \$10,000 next year, and your firm's marginal tax rate will be 35 percent. Capital expenditures of \$3,000 will be required to offset wear and tear on the truck, but no additions to working capital will be required. The FCF for the project in the next year is

- (a) \$12,500
- (b) \$15,500
- (c) \$14,500
- (d) \$13,500

**Answer:** ( )

5. Megan Gaumer expects to need \$50,000 as a down payment on a house in six years. How much does she needs to invest today in an account paying 7.25 percent?

- (a) \$32358.84
- (b) \$32853.84
- (c) \$32538.84
- (d) \$32583.84

**Answer:** ( )

6. An investment project has annual cash inflows of \$5,000, \$5,500, \$6,000, and \$7,000, and a discount rate of 14 percent. What is the discounted payback period for these cash flows if the initial cost is \$8,000?

- A. 1.85 years
- B. 1.75 years
- C. 1.65 years
- D. 1.95 years

**Answer:** ( )

7. A series of fixed receipts or payments starting at the beginning of each period for a specified number of period is called –

- (a) Hire purchase
- (b) Perpetuity
- (c) Lease
- (d) Annuity due

**Answer:** ( )

8. Determining optimum capital structure is-

- (a) An investment decision
- (b) A financing decision
- (c) A dividend decision
- (d) A liquidity decision

**Answer:** ( )

9. You have an opportunity to invest \$2,500 today and receive \$3,000 in three years. What will be then return on your investment?

- a) 6.72%
- b) 6.02%
- c) 6.27%
- d) 6.07%

**Answer:** ( )

10. Which of the following investments will have the highest future value at the end of three years? Assume that the effective annual rate for all investments is the same.

- A. You earn \$3,000 at the end of three years (a total of one payment).
- B. You earn \$1,000 at the end of every year for the next three years (a total of three payments).
- C. You earn \$1,000 at the beginning of every year for the next three years (a total of three payments).
- D. None of the Above

**Answer:** (                      )

11. The decision regarding which fixed assets to buy is called the \_\_\_\_\_ decision.

- A. financing
- B. working capital
- C. capital structure
- D. capital budgeting

**Answer:** (                      )

12. Grant Productions has borrowed a large sum from the California Finance Company at a rate of 17.5 percent for a seven-year period. The loan calls for a payment of \$1,540,862.19 each year beginning today. How much did Grant borrow?

- A. \$ \$6,999,999.98
- B. \$6,888,888.89
- C. \$6,999,888.98
- D. \$6,888,999.88

**Answer:** (                      )

13. Because management goals may conflict with shareholder goals, \_\_\_\_\_ are said to exist.

- A. synergies
- B. agency problems
- C. growth opportunities
- D. contingent claims

**Answer:** (                      )

14. Kevin Winthrop is saving for an Australian vacation in three years. He estimates that he will need \$5,000 to cover his airfare and all other expenses for a week-long holiday in Australia. If he can invest his money in an S&P 500 equity index fund that is expected to earn an average return of 10.3 percent over the next three years, how much will he have to save every year, starting at the end of this year?

- A. \$1506.20
- B. \$1560.20
- C. \$1406.20
- D. \$1460.20

**Answer:** (                      )

15. Which one of the following statements is correct, assuming all else is constant?

- A) The discount rate increases as the present value increases.
- B) The future value decreases as the present value increases.
- C) The time period increases as the interest rate increases.
- D) The present value increases as the discount rate decreases.

**Answer:** (                      )

16. Becky Scholes has \$150,000 to invest. She wants to be able to withdraw \$12,500 every year forever without using up any of her principal. What interest rate would her investment have to earn in order for her to be able to so?

- A. 8.33%
- B. 8.13%
- C. 8.00%
- D. 8.43%

**Answer:** (                      )

17. Raymond Bartz is trying to choose between two equally risky annuities, each paying \$5,000 per year for five years. One is an ordinary annuity, the other is an annuity due. Which of the following statements is most correct?

- A. The present value of the ordinary annuity must exceed the present value of the annuity due, but the future value of an ordinary annuity may be less than the future value of the annuity due.
- B. The present value of the annuity due exceeds the present value of the ordinary annuity, while the future value of the annuity due is less than the future value of the ordinary annuity.
- C. The present value of the annuity due exceeds the present value of the ordinary annuity, and the future value of the annuity due also exceeds the future value of the ordinary annuity.
- D. If interest rates increase, the difference between the present value of the ordinary annuity and the present value of the annuity due remains the same.

**Answer:** (                      )

18. Suppose three investments have equal lives and multiple cash flows. A high discount rate tends to favor:

- A. The investment with large cash flows early.
- B. The investment with large cash flows late.
- C. The investment with even cash flows.
- D. None of the investments since they have equal lives.

**Answer:** (                      )

19. You are evaluating a growing perpetuity investment from a large financial services firm. The investment promises an initial payment of \$20,000 at the end of this year and subsequent payments which will grow at a rate of 3.4 percent annually. If you use a 9 percent discount rate for investments like this, what is the present value of this growing perpetuity?

- A. \$357,241.86
- B. \$357,412.86
- C. \$357,142.86
- D. \$357,214.86

**Answer:** (                      )

20. Modern Energy Company owns several gas stations. Management is looking to open a new station in the western suburbs of Baltimore. One possibility they are evaluating is to take over a station located at a site that has been leased from the county. The lease, originally for 99 years, currently has 73 years before expiration. The gas station generated a net cash flow of \$92,500 last year, and the current owners expect an annual growth rate of 6.3 percent. If Modern Energy uses a discount rate of 14.5 percent to evaluate such businesses, what is the present value of this growing annuity?

- A. \$1,193,831.54
- B. \$ 1,213,077.56
- C. \$1,123,077.64
- D. \$1,193,283.54

**Answer:** (                      )

21. You are analyzing a proposed 4-year project. You expect to sell 20,000 units per year at an average selling price of \$5 per unit. The initial cash outlay for fixed assets will be \$120,000. These assets will be depreciated straight-line to a zero book value over the life of the project. The fixed assets will be worthless at the end of the project. Fixed costs are expected to be \$8,000 and variable costs will be \$1.90 per unit. The project requires an initial investment in net working capital of \$10,000 which will be recovered in full at the end of the project's life. What is the project's cash flow for year 4 if the tax rate is 35 percent?

- A) \$24,000
- B) \$34,000
- C) \$45,600
- D) \$55,600

**Answer:** (                      )

22. A \_\_\_\_\_ is a constant series of cash flows, occurring at regular intervals that continues forever.

- A. annuity
- B. continuity
- C. perpetuity
- D. pension

**Answer:** (                      )

23. An investment offers cash flows of \$300, -\$200, -\$125 each year starting at time zero. What is the net present value of this investment if the market rate of interest is 15%?

- A. \$31.57
- B. -\$25.00
- C. \$25.00
- D. -\$31.57

**Answer:** (                      )

24. Suppose, for example, that you have just purchased a \$450,000 condominium in Miami's South Beach district. You were able to put \$50,000 down and obtain a 30-year fixed rate mortgage at 6.125 percent for the balance. What are your monthly payments?

- A. \$2403.45
- B. \$2430.45
- C. \$2340.45
- D. \$2304.45

Answer: (                      )

25. An \_\_\_\_\_ is an investment whose acceptance or rejection does not affect, and is not affected by, the acceptance or rejection of any other projects.

- A. acceptable project
- B. independent investment project
- C. acceptable mutually exclusive project
- D. economically sound project

Answer: (                      )

26. You have just joined a regional investment banking firm. They have offered you two different salary arrangements. You can have \$81,000 per year for the next 3 years or \$60,000 per year for the next 3 years, along with a \$50,000 signing bonus today. If the market interest rate is 16%, what is the present value of the best salary arrangement?

- A. \$181,917
- B. \$243,000
- C. \$230,000
- D. \$184,753

Answer: (                      )

27. Your grandfather is retiring at the end of next year. He would like to receive a payment of \$10,000 a year forever, starting when he retires. If he can invest at 6.5 percent, how much does need to invest to receive the desired cash flow?

- A. \$135,846.15
- B. \$153,648.15
- C. \$153,684.15
- D. \$153,846.15

Answer: (                      )

28. You have been asked to analyze the investment (-\$792, \$1,780, -\$1,000). Compute the internal rate of return for this investment.

- A. 11.11%
- B. 13.64%
- C. 11.11% and 13.64%
- D. 12.38%

Answer: (                      )

29. What is the internal rate of return of an investment that costs \$125 and produces cash flows of \$15 per year forever.

- A. 8.3%
- B. 15%
- C. 10%
- D. 12%

**Answer:** (                      )

30. A firm is considering the following mutually exclusive investment projects: Project A requires an initial outlay of \$500 and will return \$120 per year for the next seven years. Project B requires an initial outlay of \$5,000 and will return \$1,350 per year for the next five years. The required rate of return is 10%. What is the net present value of the project with the highest net present value?

- A. \$340.00
- B. \$84.21
- C. \$1,750.00
- D. \$117.56

**Answer:** (                      )

31. "Managerial Discretion and Business Behavior" is the work of

- A. O. Williamson
- B. R. Marris
- C. W. J. Baumol
- D. Jensen and Meckling

**Answer:** (                      )

32. Which one of the following is the best example of an agency problem? Assume the company is paying the employees' travel expenses.

- A. Juan, the chief financial officer, travels to France to meet with the bank that is loaning the firm money to build a factory in France. While in France, he tours Paris.
- B. Mike, the president, travels to China to attend an international convention related to the company's line of business. While there, he tours the Great Wall of China.
- C. Ann, the controller, travels to Orlando, Florida to visit Disney World with friends. While there, she talks with her friends about employment opportunities at the firm.
- D. Luisa, the marketing director, travels to California to attend a sales convention. While there she visits Disneyland.

**Answer:** (                      )

33. Which one of the following represents the best effort to reduce the agency problem?

- A. paying senior managers a cash bonus each year based on the number of people employed by the company
- B. giving senior managers bonuses consisting of shares of company share whenever the company improves its production efficiency
- C. increasing the salary of the company president every time the company opens a new store
- D. Providing company cars to all managers employed by the firm for more than one year

**Answer:** (                      )

34. In estimating "after-tax incremental operating cash flows" for a project, you should include all of the following EXCEPT:

- A. sunk costs.

- B. opportunity costs.
- C. changes in working capital resulting from the project, net of spontaneous changes in current liabilities.
- D. effects of inflation.

Answer: (            )

35. Which one of the following is an agency cost?

- A. accepting an investment opportunity that will add value to the firm
- B. increasing the quarterly dividend
- C. hiring outside accountants to audit the company's financial statements
- D. closing a division of the firm that is operating at a loss

Answer: (            )

36. Albert is buying a new vehicle today that costs \$36,995. He has a trade-in valued at \$9,500. Albert is also paying \$4,000 cash toward the purchase. What is the amount of his monthly loan payment if he finances the car for 24 months at 3.9% interest?

- A. \$942.86
- B. \$1,019.22
- C. \$1,192.74
- D. \$1,431.34

Answer: (            )

37. Which one of the following is correct if the time period is increased while the interest rate remains constant?

- A. The annual payment from a given present value amount will increase.
- B. The present value required to reach a given future value will increase.
- C. The present value of an annuity will decrease.
- D. The future value of a given present value will increase.

Answer: (            )

38. Which one of the following is the best description of the goal of a financial manager in a corporation where shares are publicly traded?

- A. maximize sales growth over the short-term
- B. maximize profits over the short-term
- C. maintain steady earnings growth
- D. maximize the current value per share of the existing stock

Answer: (            )

39. The term "capital structure" refers to:

- A. long-term debt, preferred stock, and common stock equity.
- B. current assets and current liabilities.
- C. total assets minus liabilities.
- D. shareholders' equity.

Answer: (            )

40. The cost of monitoring management is considered to be a (an):

- A. bankruptcy cost.
- B. transaction cost.
- C. agency cost.
- D. institutional cost.

Answer: (            )