

Chapter 2: Fundamental concepts and techniques

Self test questions

1. Which of the following are sources of the time value of money?
 - (a) A positive risk free interest rate ☐ True ☐ False
 - (b) Peoples' preference for present rather than future consumption ☐ True ☐ False
 - (c) Productive investment opportunities ☐ True ☐ False
 - (d) People's risk aversion ☐ True ☐ False
2. If you invest 100 for two years at an annual interest rate of 4% compounded semi-annually, the end value is:
 - (a) 104.25
 - (b) 108.00
 - (c) 108.16
 - (d) 108.24
3. If you invest 50 for two years at an annual interest rate of 5% compounded continuously, the end value is:
 - (a) 55.00
 - (b) 55.13
 - (c) 55.19
 - (d) 55.26
4. If the compounding frequency increases, the effective annual rate:
 - (a) Increases
 - (b) Is not affected
 - (c) Decreases
5. A loan has an annual interest rate of 8% but the interest has to be paid quarterly. What is the effective annual rate?
 - (a) 8.20%
 - (b) 8.24%
 - (c) 8.88%
 - (d) 16.64%

6. If the annual interest rate is 6%, what is the present value of a perpetual cash flow of 25 that starts 1 year from now?
- (a) 416.67
 - (b) 417.27
 - (c) 418.80
 - (d) 545.66
7. If the annual interest rate is 5%, what is the present value of a perpetual cash flow of 50 that starts 1 year from now and that grows with 4% per year?
- (a) 1357.90
 - (b) 1722.70
 - (c) 2868.40
 - (d) 5000.00
8. What is depreciation?
- (a) The accounting way of spreading the costs of long lived assets over time ☐ True ☐ False
 - (b) The annual reduction in book value of fixed assets ☐ True ☐ False
 - (c) A cost in bookkeeping terms but not a cash out-flow ☐ True ☐ False
 - (d) A sudden drop in value because prices on the stock market change ☐ True ☐ False
9. Does depreciation affect the firm's cash flow?
- (a) Yes, it is a cost that reduces net profit
 - (b) Yes, but only indirectly because it is tax deductible and reduces the tax bill
 - (c) No, it is a bookkeeping entry and not a cash out-flow
10. The balance sheet identity means that:
- (a) Total assets = Equity + Liabilities ☐ True ☐ False
 - (b) The sum of left hand side of the balance sheet is equal to the sum of the right hand side ☐ True ☐ False
 - (c) The value of the firm's possessions is equal to the value of the claims against these possessions ☐ True ☐ False
11. Current assets are assets that are:
- (a) Converted into cash within a short period of time
 - (b) Held in foreign currencies
 - (c) Presently in use
 - (d) None of the above
12. What are accounts receivable?
- (a) The amount owed to the firm by its business partners
 - (b) The amount the firm owes to its business partners
 - (c) The positive balance of the above two

13. What are accounts payable?
- (a) The amount owed to the firm by its business partners
 - (b) The amount the firm owes to its business partners
 - (c) The positive balance of the above two
14. What is net working capital?
- (a) The total value of all current assets
 - (b) The total value of all current liabilities
 - (c) The positive balance of the above two
15. What is equity?
- (a) The capital supplied by the firm's owners ☐ True ☐ False
 - (b) The capital supplied by the firm's managers ☐ True ☐ False
 - (c) The claim of the shareholders against the firm's possessions ☐ True ☐ False
 - (d) The difference in value between the firm's possessions and its outstanding liabilities ☐ True ☐ False
16. Book values are close to market values:
- (a) For accounting items that are short lived
 - (b) If the firm uses a low depreciation rate
 - (c) If the firm has a very good bookkeeping system
17. What is the opportunity cost of capital for a risky project?
- (a) The time value of money
 - (b) The time value of money plus expected inflation
 - (c) The time value of money plus a risk premium estimated from similar projects
 - (d) The time value of money plus expected inflation plus a risk premium estimated from similar projects
18. Which of the following items are included in the accounting representation of a project but not in the financial representation?
- (a) Investment outlay ☐ True ☐ False
 - (b) Depreciation ☐ True ☐ False
 - (c) Irreversible past investments ☐ True ☐ False
 - (d) Changes in net working capital ☐ True ☐ False
19. Which of the following items are included in the financial representation of a project but not in the accounting representation?
- (a) Investment outlay ☐ True ☐ False
 - (b) Depreciation ☐ True ☐ False
 - (c) Irreversible past investments ☐ True ☐ False
 - (d) Changes in net working capital ☐ True ☐ False

20. The incremental cash flows caused by a new project include:
- (a) Cash flow reductions of other projects ☐ True ☐ False
 - (b) Increased utilization of idle capacity ☐ True ☐ False
 - (c) Depreciation of the assets in use ☐ True ☐ False
 - (d) Cash flow increases of other projects ☐ True ☐ False
21. Which of the following are deficiencies of the book rate of return?
- (a) It uses accounting returns instead of cash flows ☐ True ☐ False
 - (b) It ignores that later returns are less valuable than earlier ones ☐ True ☐ False
 - (c) It calculates a return for each year of the project's life ☐ True ☐ False
 - (d) It does not use a market based required return rate ☐ True ☐ False
22. Which of the following are disadvantages of the payback period?
- (a) It does not use discounted cash flows ☐ True ☐ False
 - (b) It does not include all cash flows ☐ True ☐ False
 - (c) It ignores the time value of money ☐ True ☐ False
 - (d) It ignores the riskiness of cash flows ☐ True ☐ False
23. Which of the following are disadvantages of the internal rate of return (IRR)?
- (a) It incorrectly accepts projects whose IRR is larger than the opportunity cost of capital ☐ True ☐ False
 - (b) It only works for normal cash flow patterns (first out-, then inflows) ☐ True ☐ False
 - (c) A project can have more than 1 internal rate of return ☐ True ☐ False
 - (d) Its results are unreliable for mutually exclusive projects ☐ True ☐ False
24. Why are utility functions concave?
- (a) Because each additional unit of a good gives less utility than its predecessor
 - (b) Because people assign less weight to consumption (far) in the future
 - (c) Because people are risk averse
25. What are indifference curves?
- (a) Combinations of choices that give the same utility ☐ True ☐ False
 - (b) The intersection of a fixed utility value with a 2-dimensional utility function ☐ True ☐ False
 - (c) Instruments for rational economic decision making ☐ True ☐ False
26. Risk aversion follows from:
- (a) Human nature
 - (b) Concave utility functions
 - (c) Assumptions about economic decision making
 - (d) None of the above

27. Fisher separation means that:

- (a) The investment and consumption decision can be separated ☐ True ☐ False
- (b) It does not matter where the money comes from, only where it goes to ☐ True ☐ False
- (c) Managers do not have to know clients' utility functions to make investment decisions ☐ True ☐ False
- (d) Managers can use market data ☐ True ☐ False
- (e) Managers can use the rule: maximize net present value ☐ True ☐ False

28. Which of the following are functions of *primary* financial markets?

- (a) Generate funds for companies ☐ True ☐ False
- (b) Provide marketability and liquidity ☐ True ☐ False
- (c) Determine prices ☐ True ☐ False

29. Which of the following are functions of *secondary* financial markets:

- (a) Generate funds for companies ☐ True ☐ False
- (b) Provide marketability and liquidity ☐ True ☐ False
- (c) Determine prices ☐ True ☐ False

30. Which of the following are functions or practices of *brokers*:

- (a) Provide access to financial markets, but do not buy or sell ☐ True ☐ False
- (b) Stand ready to buy and sell at quoted prices ☐ True ☐ False
- (c) Hold an inventory of shares to meet demand ☐ True ☐ False
- (d) Charge a fee (commission) ☐ True ☐ False
- (e) Receive the difference between bid and ask prices ☐ True ☐ False

31. Which of the following are functions or practices of *dealers*:

- (a) Provide access to financial markets, but do not buy or sell ☐ True ☐ False
- (b) Stand ready to buy and sell at quoted prices ☐ True ☐ False
- (c) Hold an inventory of shares to meet demand ☐ True ☐ False
- (d) Charge a fee (commission) ☐ True ☐ False
- (e) Receive the difference between bid and ask prices ☐ True ☐ False

32. A *long* position in shares:

- (a) Means holding the shares ☐ True ☐ False
- (b) Profits from a price *increase* ☐ True ☐ False
- (c) Is usually for the long run ☐ True ☐ False
- (d) Requires a margin to be deposited ☐ True ☐ False

33. A *short* position in shares:

- (a) Means owing the shares ☐ True ☐ False
- (b) Profits from a price *decrease* ☐ True ☐ False
- (c) Is usually for the long run ☐ True ☐ False
- (d) Requires a margin to be deposited ☐ True ☐ False