

ACC501 – Business Finance
Practice (Numerical) Questions
(Lesson # 19 – 45)

IMPORTANT INSTRUCTIONS:

Dear Students,

It is advised to read the following **instructions** carefully before attempting the numerical practice questions provided in this document:

- You are required to solve/attempt all the questions **on your own**. **DO NOT** send the solution of any question to the teacher via Email or MDB because the **solution file** will also be uploaded in a few days. *(Any query relevant to these questions will be addressed in the upcoming interactive live session of the course.)*
- You must consult the relevant lesson before attempting any question. In case you have any problem while attempting the question, you may note it down for the discussion in the upcoming interactive live session. **DO NOT** send any questions through MDB or Email.
- Once the solution file is uploaded, you may compare your attempts with the actual solution of the questions.
- The questions provided in this file are solely for practice purposes. If you try to attempt/solve these questions with due attention, you may be able to attempt the numerical questions in exam as well.
- For practicing MCQs, you are advised to attempt the ‘Formative Assessment Quizzes’ available in the “Reading” tab of Lessons # 22, 27, 32, 36 and 45.
- As far as theoretical questions are concerned, you are advised to watch video lectures carefully and consult the handouts along with recommended book(s).

Good Luck,
Instructor ACC501

Practice (Numerical) Questions

(Lesson # 19 – 45)

1. The nominal rate is 12%, and the inflation rate is 5%. Find out the real rate according to Fisher's formula.
2. Suppose XYZ Company issues a 3-year zero coupon bond with a face value of Rs. 5,000. The initial price is set at Rs. 3,043 with a yield to maturity of 18%. What will be the value of implicit interest expense in each year?
3. Estimate the real rate with the help of the Fisher effect equation if: the nominal rate is 11% and the inflation rate is 4%.
4. Calculate the price of a share of stock of ABC Corporation if it pays Rs.25 per share dividend every year. This policy continues indefinitely, and the required rate of return is 20%.
5. In both the cases given below, what will be the current price of stock?
 - a) If ABC company on its shares is giving a fixed dividend of Rs. 16 per share per annum which will continue indefinitely with a required rate of return of 24%.
 - b) If XYZ Company on its shares is giving a dividend of Rs. 13 per share with 26% required rate of return; it is expected that after one year these shares will be worth Rs. 120.
6. Suppose Ali Corporation has a policy for paying Rs. 70 as a dividend per share each year. If the policy seems to be continued for an infinite period, what would be the value of share stock with the required rate of return of 45%?
7. Ali Corporation has just paid a dividend of Rs.3 per share. The dividend of this company grows at a steady rate of 7% per year. What will be the dividend in 5 years?
8. Ali Corporation pays a Rs. 9 per share dividend a year from today. If the dividend grows at a steady rate of 5% per year, what will be the dividend per share at the end of each of the first two years? (*Note: Dividend is paid at the end of the first year*)
9. Suppose that the current dividend is Rs.3.5, the discount rate is 11% and the dividend grows at a constant rate of 4%. What is the current price of this stock?
10. In case, a current dividend is Rs. 3.20, the discount rate is 11% and the growth rate is 4%. Calculate the dividend and stock price in 5 years.
11. If a firm's common stock currently pays an annual dividend of Rs. 2.10 per share, while the required return on the common stock is 11 percent. Estimate the value of common stock when:
 - a) Dividends are expected to grow at an annual rate of 0 percent to infinity.
 - b) Dividends are expected to grow at a constant annual rate of 6 percent to infinity.

12. Calculate the current stock price (P_0) and stock price after one year (P_1) of Ali Corporation with the help of the following information:

	D1	g	R
For current period	8	5%	13%
For future period (after 1 year)	8	8%	15%

13. The stock of Ali Corporation is selling for Rs.25 per share. The next dividend is Rs.1.7 per share and it is expected to grow by 11% indefinitely. Compute the return offered by this stock.
14. Ali Corporation is selling its stock for Rs. 25 per share. The next dividend is Rs.1.5 per share and the required rate of return is 16%. Compute the capital gains yield.
15. If a stock is selling for Rs. 30 per share; the next dividend is Rs. 1.5 per share; and it is expected to grow by 11% more or less indefinitely. What dividend yield, capital gain yield, and total return this stock can offer?
16. If a project will generate cash flows of Rs. 10,000 for next 7 years; for which initial investment is required of Rs. 40,000. What will be the Net Present Value (NPV) of the project at a discount rate of 12%? Is it feasible to invest in this project?
17. The expected cash flows over the 3-year life of a Project are Rs.2,500, Rs.4,500, and Rs.6,000 respectively. The project cost is Rs.7,000. Compute NPV given that the discount rate is 10%.
18. If a project has a total up-front cost of Rs.70,000; while the cash flows are Rs.35,000 in the 1st year, Rs.25,000 in the 2nd year, and Rs.30,000 in the 3rd year. What would be the NPV of the project at a discount rate of 10%? Is the project feasible?
19. Compute the Average Accounting Return for the project having a cost of Rs. 600,000 with a life of 5 years and zero salvage value. Revenues are given below:

Years	1	2	3	4	5
Net Income (Rs.)	160,000	200,000	150,000	120,000	100,000

20. Calculate the IRR for the project which has an initial investment of Rs. 90 million and is followed by the cash flow of Rs. 35 million in year 1, Rs. 45 million in year 2, and Rs. 25 million in year 3. Also, specify whether the project is feasible or not if the required rate of return is 12%. (*Note: Show complete working of the trial-and-error method with interpolation formula.*)
21. A project generates cash flows of Rs. 600, Rs. 800, and Rs. 1,000 for year 1, year 2, and year 3 respectively. What is the payback period for the project if there is an initial cost of Rs. 2,400?
22. An investment costs \$75 and the present value of future cash flows is \$150. Compute and interpret the Profitability Index (PI) for this investment.
23. Calculate the projected operating cash flows of a project if EBIT, Depreciation, and Taxes are given as Rs. 30,000, Rs. 15,000, and Rs. 10,000 respectively.

24. If the following information is available regarding XYZ Company:

- Sales are 25,000 units/year @ Rs. 8/unit.
- Variable cost/unit is Rs. 5.
- Fixed costs are Rs. 15,000/year.
- Project life is 6 years, and the project has no salvage value.
- Project cost is Rs. 35,000. Depreciation is Rs. 7,000/year.
- Investment in net working capital is Rs. 15,000.
- The tax rate is 30%.

You are required to prepare its Projected Income Statement.

25. Suppose there is an operating cash flow of Rs. 150,000. Net working capital has declined by Rs. 30,000 and there was no capital spending during the year. Calculate total cash flow.

26. Suppose the total cash flow is Rs. 120,000. Net working capital has increased by Rs. 40,000 and there is net capital spending of Rs. 20,000 during the year. You are required to calculate the Operating Cash Flow.

27. A company purchased equipment (classified as 5-year property for MACRS) for Rs. 100,000. What would be the book value of the equipment at the end of the second year using the MACRS depreciation percentage table?

Years	1	2	3	4	5	6
MACRS	20%	32%	19.20%	11.52%	11.52%	5.76%

28. Star Company purchased research equipment (classified as 3-year property for MACRS) for Rs. 400,000. MACRS rates over the life of the property are 33.33%, 44.44%, 14.82%, and 7.41% respectively. You are required to calculate the depreciation under the MACRS method. Also, calculate its book value at the end of the first year.

29. Suppose a stock had an initial price of Rs. 80 per share one year ago. It paid a dividend of Rs. 12 per share during the year. What was the dividend yield?

30. A particular investment had returns of 9%, 15%, 6%, and -5% over the last four years. Find out the variance and standard deviation for the returns of the investment.

31. A particular stock expects 15% rate of return. What will be the risk premium if risk free rate is (i) 7% and (ii) 11%?

32. Suppose stock "A" gives returns of 12%, 10%, 42% and -22% over the period of four years. You are required to calculate average return on the stock.

33. The following data pertains to stocks X and Y. Which stock will you prefer for investment if the probability of boom and recession is 50% for each?

Stock	Expected Return (Boom)	Expected Return (Recession)
X	40%	28%
Y	-10%	8%

34. Considering the following expected returns during the different states of economy, calculate expected return on portfolio:

State of Economy	P	Portfolio Return
Boom	0.35	27%
Normal	0.40	18%
Recession	0.25	8%

35. A stock gives returns of 18%, 24%, 32% and -22% from year 1 to 4 respectively. You are required to calculate Average Return, Variance and Standard Deviation.
36. Mr. Nadeem invests 55% of his funds in Security A and the balance in Security B. The expected returns on A and B are 20% and 15% respectively. You are required to calculate the expected return on the portfolio.
37. A company has borrowed Rs. 850,000 at an interest rate of 12%. Considering the tax rate of 35%, you are required to calculate After-tax Interest Bill.
38. A Company paid a dividend of Rs. 7 per share last year. The stock's current price is Rs. 45 per share. Find out the cost of the capital if dividends are estimated to grow steadily at 9% per year.
39. Preferred stocks of a company have paid an annual dividend of Rs. 3.50 per share and sold for Rs. 40 per share. Calculate the cost of preferred stock.
40. Star Inc. has 35% debt and 65% equity in its capital structure, the firm's estimated after-tax cost of debt is 13% and cost of equity is 16%. Determine the firm's weighted average cost of capital (WACC).
41. A company has a target capital structure of 60 percent common stock and 40 percent debt. Its cost of equity is 16% and the cost of debt is 9%. Determine weighted average cost of capital (WACC) if the tax rate is 35%.
42. Calculate the weighted average cost of capital (WACC) for both Firm A and Firm B.
- Capital structure of Firm A has 25% equity and 75% debt; while its cost of equity is 17% and its cost of debt is 13% with a 35% tax bracket.
 - Capital structure of Firm B has 30% debt and 70% equity; while firm's estimated after-tax cost of debt is 12% and cost of equity is 16%.
43. AST Inc. has 2 million shares of common stock outstanding and the current market price per share is Rs. 25. The market value of total debt is Rs. 50 million. The cost of equity is estimated as 16 percent while the after-tax cost of debt is 8 percent. Calculate the capital structure weights and WACC (Weighted Average Cost of Capital) of the company.
44. Calculate the Payable Turnover and Payable Period of a company from following information.

Balance Sheet information (in rupees):

Item	Beginning	Ending	Average
Inventory	4,000,000	5,000,000	4,500,000
Accounts Receivable	1,400,000	2,000,000	1,700,000
Accounts Payable	800,000	1,000,000	900,000

Income Statement information (in rupees):

Net Sales	10,500,000
Cost of Goods Sold	9,000,000

45. If a company inventory period is 107 days and receivable turnover is 8.69 days; what will be firm's receivable period and operating cycle? Assume year of 365 days.

46. Calculate company's operating cycle and cash cycle from given information.

Inventory turnover = 7 times

Receivable turnover = 21 times

Payable turnover = 8 times

(Note: Show formulas and complete working by assuming year of 365 days.)

47. A company has receivable period is 19.8 days and payable period is 30 days. The Cost of Goods Sold of Rs. 2,000,000 and Average Inventory is of Rs. 450,000. Calculate the company's operating cycle and cash cycle?

(Note: Show formulas and complete working by assuming year of 365 days.)

48. ABC Company has following financial information regarding cash budget of first quarter of accounting period:

Particulars	Month-1 (Rs.)	Month-2 (Rs.)	Month-3 (Rs.)
Beginning Receivables	1,500	1,200	Blank (2)
Sales	5,700	7,900	7,800
Cash collection	6,000	6,900	8,300
Ending Receivables	Blank (1)	2,300	Blank (3)

Calculate values for the blanks (1), (2) and (3)?

49. ABC Company has following information regarding its forecasted sales:

Particular	Month-1	Month-2	Month-3
Sales (Rs.)	6,700	7,900	9,100
Cash collection policy: 1/3 in the month of sales; and 2/3 in the following month of sales			

What will be the amount of cash collection in Month-2 and Month-3?

50. Regarding cash budget a company has following financial information.

Ending Cash Balance = Rs. 3,500

Net Cash Inflow = Rs. 6,900

Total Cash Disbursement = Rs. 7,300

You are required to calculate the opening cash balance of the company.

51. Regarding cash budget a company has following financial information.

Ending Cash Balance = Rs. 2,500

Net Cash Inflow = Rs. 6,800

Total Cash Disbursement = Rs. 7,900

Minimum Cash Balance Required = Rs. 2,200

What will be the amount company needs to borrow to maintain minimum cash balance?

52. A company has following information regarding its book balance and cash transactions:

Book Balance (Bank column)	= Rs. 10,000
August 01, 2023, deposited a cheque into bank	= Rs.3,000
August 01, 2023, write a cheque to make a payment	= Rs.1,500

You are required to calculate the net float of company.

53. Mr. Abrar placed an order amounting to Rs. 45,000 on August 01, 2023, and supplier gives credit terms 3/10 net 30. How much amount he must pay if payment is made on (i) August 09, 2023, and (ii) August 11, 2023?

54. Following information has been extracted from the books of a company:

Annual Sales requirement	= 50,000 Units
Carrying cost per unit per year	= Rs. 2
Fixed cost per order	= Rs. 60

Calculate Economic Order Quantity (EOQ) of the company.

55. Following information has been extracted from the books of a company:

Annual Sales	=86,400 Units
Economic Order Quantity (EOQ)	= 3,000 Units
Carrying cost per unit per year	= Rs. 3.5

You are required to calculate total carrying cost of the company.

56. Following information has been extracted from the books of a company:

Annual Sales	=40,000 Units
Economic Order Quantity (EOQ)	= 2,500 Units
Fixed cost per order	= Rs. 250

You are required to calculate total ordering cost of the company.

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