



S. B. JAIN INSTITUTE OF TECHNOLOGY, MANAGEMENT & RESEARCH, NAGPUR.

(An Autonomous Institute, Affiliated to RTMNU, Nagpur)



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

"To become a center for quality education in the field of computer science & engineering and to create competent professionals."

Name of Course: Economic & Finance for Engineers

Academic Year: 2023-2024

Year/Semester: III / VIth sem

Name of Course In-charge: Prof. Swati Goyal

Question Bank

Unit-1

- 1) Explain the Concept of economics with suitable example and also discuss the scope of economics.
- 2) Write down the difference between Microeconomics & Macroeconomics with suitable example.
- 3) Discuss the law of demand & supply .
- 4) What are the determinants of demand?
- 5) Define Elasticity of demand and also write its concept.
- 6) What are the types of Elasticity of demand explain it.
- 8) What do you understand by the term Economics & Diseconomies of Scale .

Unit-2

- 1) Explain meaning & types of Financial statement.
- 2) Write down the concept of cash flow statement.
- 3) Explain the term assets also write types of assets with suitable example.
- 4) Prepare the Performance of Balance sheet
- 3) Write a short notes on :
 - i) Cash flow from operating activities
 - ii) Cash flow from financing activities
 - iii) Cash flow from investing activities.

Unit-3

- 1) Write down the Concept of ratio analysis & significance of ratio analysis.
- 2) Explain the types of ratios

- 3) Write a short notes on : i) Liquidity ratio ii) Solvency ratio iii) Leverage ratio
iv) Activity ratio v) Profitability ratios.

Unit-4

- 1) Explain the concept of time value of money and its importance
2) Write down the meaning & types of interest.
3) Write a short notes on : i) Future value of money ii) Present value of money

Unit No -2 (Problems)

A. Examples of Profit and Loss Statement

Example 1:

From the following particulars, prepare Statement of profit and loss for the year ending March 2020, as per the revised Schedule III:

Tax rate is 30%

Particulars	Amount
Depreciation on Plant and Machinery	32,000
Purchases	8,00,000
Wages	2,40,000
Sales (Net)	20,00,000
Salaries	1,60,000
Finance Cost	20,000
	32,52,000

Solution:

*Preparation of Statement of Profit & Loss Account
(As per Company act 2013, Schedule III)*

Name of the Company:

For the year ending March 2020

Particulars	Note No.	Amount
1) Revenue from operation		20,00,000
2) Other Income		-
Total Revenue (A)		20,00,000
3) Expenses-		
• Cost of material consumed		8,00,000
• Purchase of stock in trade		-

• Change in inventories of finished goods/WIP/ Stock		-
• Employee benefits expense	1	4,00,000
• Finance cost		20,000

• Depreciation & Amortization expenses		32,000
• Other expenses		-
Total expenses (B)		12,52,000
4) Profit before tax (A-B)		7,48,000
5) less- Tax		2,24,400
6) Profit after tax		5,23,600

Note 1:

Employee benefits expense	
Wages	2,40,000
Salaries	1,60,000
Total	4,00,000

Example 2:

Following is the Trial Balance of Birla Cement Company for the year ended 31st March 2022.

*Birla Cement Company
Trial Balance*

Particulars (Expense)	Amount	Particulars (Income)	Amount
Opening Inventory	3,40,000	Sales	21,34,000
Purchases	11,59,000	Rent Received	23,000
Wages	4,50,000	Transfer Fees	5,000
Interest on Bank Loan	58,000		
Debenture Interest	10,000		
Consumables	42,000		
Preliminary Expenses	5,000		
Bad Debts	17,500		
Discounts	20,000		
Rentals	12,500		
Commission	60,000		
Advertisement	10,000		
Dealers Aid	10,500		
Transit Insurance	15,000		
Trade Expenses	36,000		
Distribution	27,000		

Closing Stock on 31st March 2022 is 4,11,500.

From the following particulars, prepare Statement of profit and loss for the year ending March 2022, as per the revised Schedule III:

Solution:

*Preparation of Statement of Profit & Loss Account
(As per Company act 2013, Schedule III)*

*Name of the Company: Birla Cement Company
For the year ending 31st March 2022*

Particulars	Note No.	Amount
1) Revenue from operation		21,34,000
2) Other Income	1	28,000
Total Revenue (A)		21,62,000
3) Expenses-		
a. Cost of material consumed		11,59,000
b. Purchase of stock in trade		-
c. Change in inventories of finished goods/WIP/ Stock	2	71,500
d. Employee benefits expense		4,50,000
e. Finance cost	3	68,000
f. Depreciation & Amortization expenses		-
g. Other expenses	4	2,55,500
Total expenses (B)		18,61,500
4) Profit before tax (A-B)		3,00,500
5) less- Tax		-
6) Profit after tax		3,00,500

Note 1:

Other Income	
Rent Received	23,000
Transfer Fees	5,000
Total	28,000

Note 2:

Change in inventories of finished goods/WIP/ Stock	
Closing Stock	4,11,500
Less: Opening Inventory	(3,40,000)
Total	71,500

Note 3:

Finance cost	
Interest on Bank Loan	58,000
Debenture Interest	10,000
Total	68,000

Note 4:

Other expenses	
Consumables	42,000
Preliminary Expenses	5,000
Bad Debts	17,500
Discounts	20,000
Rentals	12,500
Commission	60,000
Advertisement	10,000
Dealers Aid	10,500
Transit Insurance	15,000
Trade Expenses	36,000
Distribution	27,000
Total	2,55,500

Example 3:

The following is the trial balance of XYZ Ltd. as on 31st December 2022.

Particulars	Debit Amount	Credit Amount
Stock	1,25,000	
Sales		4,00,000
Purchases	3,45,000	
Wages	50,000	
Discount Paid	7,000	
Salaries	7,500	
Rent Paid	4,950	
Insurance paid	17,050	
Discount Received		50,000

Prepare Profit and Loss Account as on 31st December 2022 as per Schedule III of Companies Act 2013.

Solution:

*Preparation of Statement of Profit & Loss Account
(As per Company act 2013, Schedule III)*

Name of the Company: XYZ Ltd

For the year ending 31st December 2022

Particulars	Note No.	Amount
1) Revenue from operation		4,00,000
2) Other Income		50,000
Total Revenue (A)		4,50,000
3) Expenses-		
a. Cost of material consumed		3,45,000
b. Purchase of stock in trade		1,25,000
c. Change in inventories of finished goods/WIP/ Stock		-
d. Employee benefits expense	1	57,500
e. Finance cost		-

f. Depreciation & Amortization expenses		-
g. Other expenses	2	29,000
Total expenses (B)		5,56,500
4) Profit before tax (A-B)		(1,06,500)
5) less- Tax		-
6) Profit after tax		(1,06,500)

Note 1:

Employee benefits expense	
Wages	50,000
Salaries	7,500
Total	57,500

Note 2:

Other expenses	
Discount Paid	7,000
Rent Paid	4,950
Insurance paid	17,050
Total	29,000

Practice questions on Balance Sheet

Example 1:

Following is the ledger balances of Mohan Ltd.

Particulars	Amount	Particulars	Amount
Furniture	2,50,000	Machinery	16,00,000
Bank Loan for 10 years	2,30,000	Provision for Tax	70,000
General Reserve	2,70,000	Cash in Hand	2,50,000
Preference Share Capital	15,00,000	Trade Receivables	3,60,000
Equity Share Capital	13,00,000	Other Current Assets	65,000
Trade Payable	43,000	Bank Overdraft	2,25,000
Other Current Liabilities	4,50,000	Loan given to Director for 10 years	1,86,000
Investments	5,62,000	Goodwill	2,70,000
Interest on investment	24,000	Cash at Bank	5,21,000

Prepare Balance Sheet of the Company as on 31st March 2022 as per Schedule III of the Companies Act 2013.

Solution:

Balance Sheet

Name of the Company: Mohan Ltd.

Balance Sheet as on: 31st March 2022

Particulars	Note No.	Amount
A. Equity and Liabilities		
5) Shareholder's Fund:		
iv) Share Capital	1	28,00,000
v) Reserves and Surplus		2,70,000
6) Non-current Liabilities		
v) Long Term Borrowings		2,30,000
7) Current Liabilities:		
v) Short Term Borrowings		2,25,000
vi) Trade Payables		43,000
vii) Other Current Liabilities		4,50,000

viii) Short Term Provisions		70,000
Total		40,88,000
B. Assets		
3) Non-Current Assets:		
vi) Fixed Assets		
e) Tangible Assets	2	18,50,000
f) Intangible Assets		2,70,000
vii) No- current investments		5,62,000
viii) Long Term Loans and Advances		1,86,000
4) Current Assets:		
i) Trade Receivables		3,60,000
ii) Cash and Cash Equivalence	3	7,71,000
iii) Other Current Assets	4	89,000
Total		40,88,000

Note 1:

Share Capital	
Preference Share Capital	15,00,000
Equity Share Capital	13,00,000
Total	28,00,000

Note 2:

Tangible Assets	
Furniture	2,50,000
Machinery	16,00,000
Total	18,50,000

Note 3:

Cash and Cash Equivalence	
Cash in Hand	2,50,000
Cash at Bank	5,21,000
Total	7,71,000

Note 4:

Other Current Assets	
Other Current Assets	65,000
Interest on investments	24,000
Total	89,000

Example 2:

Following is the Ledger Balance of Birla Cement Company for the year ended 31st March 2020.

*Birla Cement Company
Ledger Balance
(As on 31st March, 2020)*

Particulars	Amount	Particulars	Amount
Inventory	4,11,500	Equity Share Capital	12,50,000
Furniture	3,00,000	Bank Loans	5,72,500
Loan to Directors for 6 months	40,000	Trade Payables	1,40,500
Plant and Machinery	12,02,500	General Reserve	3,70,000
Cash	26,500		
Goodwill	1,32,500		
Trade Receivables	2,20,000		

Prepare Balance Sheet of Birla Cement Company for the year ended 31st March 2020 as required by Schedule III of the Companies Act.

Solution:

Balance Sheet

Name of the Company: Birla Cement Company

Balance Sheet as on: 31st March 2020

Particulars	Note No.	Amount
A. Equity and Liabilities		
1) Shareholder's Fund:		
i) Share Capital		12,50,000
ii) Reserves and Surplus		3,70,000
2) Non-current Liabilities		
i) Long Term Borrowings		5,72,500

3) Current Liabilities:		
i) Trade Payables		1,40,500
Total		23,33,000
B. Assets		
1) Non-Current Assets:		
i) Fixed Assets		
a) Tangible Assets	1	15,02,500
b) Intangible Assets		1,32,500
2) Current Assets:		
i) Inventories		4,11,500
ii) Trade Receivables		2,20,000
iii) Cash and Cash Equivalence		26,500
iv) Short Term Loans and Advances		40,000
Total		23,33,000

Note 1:

Tangible Assets	
Furniture	3,00,000
Plant and Machinery	12,02,500
Total	15,02,500

Example 3:

Prepare Balance Sheet in vertical form as at 31st March 2020 from the following information of ABC Ltd as required under schedule III of the Companies Act, 2013.

Term Loans	10,00,000	Sundry Debtors	12,04,800
Sundry Creditors	11,45,000	Miscellaneous Expenses	58,000
Cash and Bank Balance	2,75,000	Other Current Liabilities	2,00,000
Staff Advances	55,000	Fixed Assets	46,50,000
Provision for Taxation	1,70,000	Finished Goods	12,00,000
Investments	2,25,000	General Reserve	22,25,000
Unsecured Loan	27,00,000	Capital Work in Progress	2,00,000
Share Capital	13,00,000	Goodwill	9,30,200

Solution:

Balance Sheet

Name of the Company: ABC Ltd

Balance Sheet as on: 31st March

2020

Particulars	Note No.	Amount
A. Equity and Liabilities		
1) Shareholder's Fund:		
i) Share Capital		13,00,000
ii) Reserves and Surplus		22,25,000
2) Non-current Liabilities		
i) Long Term Borrowings	1	37,00,000
3) Current Liabilities:		
i) Trade Payables		11,45,000
ii) Other Current Liabilities		2,00,000
iii) Short Term Provision		1,70,000
Total		87,40,000
B. Assets		
1) Non-Current Assets:		
i) Fixed Assets		
a) Tangible Assets		46,50,000
b) Intangible Assets		9,30,200
c) Capital Work in Progress		2,00,000
ii) Investments		2,25,000
2) Current Assets:		
i) Inventories		12,00,000
ii) Trade Receivables		12,04,800
iii) Cash and Cash Equivalence		2,75,000
iv) Short Term Loans and Advances		55,000
Total		87,40,000

Note 1:

Long Term Borrowings	
Term Loans	10,00,000
Unsecured Loan	27,00,000
Total	13,00,000

Example 4:

Following is the Ledger Balance of XYZ Ltd for the year ended 31st March 2020.

Particulars	Debit Amount	Credit Amount
Capital		1,00,000
Debtors	67,500	
Creditors		17,500
Machinery	34,000	
Reserve Fund		2,60,200
Cash	16,200	
Proposed Income Tax		40,000
Inventories	3,00,000	

Prepare Balance Sheet for the year ended 31st March 2020 as required by Schedule III of the Companies Act.

Solution:

Balance Sheet

Name of the Company: XYZ Ltd
Balance Sheet as on: 31st March
2020

Particulars	Note No.	Amount
A. Equity and Liabilities		
1) Shareholder's Fund:		
i) Share Capital		1,00,000
ii) Reserves and Surplus		2,60,200
2) Non-current Liabilities		
i) Long Term Borrowings		
3) Current Liabilities:		
i) Trade Payables		17,500
ix) Short Term Provisions		40,000
Total		4,17,700
B. Assets		
1) Non-Current Assets:		
i) Fixed Assets		
a) Tangible Assets		34,000
b) Intangible Assets		
2) Current Assets:		
i) Inventories		3,00,000



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ii)	Trade Receivables		67,500
iii)	Cash and Cash Equivalence		16,200
iv)	Short Term Loans and Advances		
	Total		4,17,700

Unit No-3 (Problems) :

1) Following information is given by a company from its books of accounts as on March 31, 2024 :

Particulars	(Rs.)
Gross Profit	50,000
Revenue from Operations	1,00,000
Inventory	15,000
Trade Receivables	27,500
Cash and Cash Equivalents	17,500
Current Liabilities	40,000
Land & Building	50,000
Plant & Machinery	30,000
Furniture	20,000

Calculate:

- i) Current Ratio
- ii) Acid test Ratio
- iii) Gross Profit Ratio
- iv) Inventory Turnover Ratio

2) Current Ratio is 3.5 : 1. Working Capital is Rs. 90,000.

Calculate the amount of Current Assets and Current Liabilities.

(Ans: Current Assets Rs. 1,26,000 and Current Liabilities Rs. 36,000)



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3) Shine Limited has a current ratio 4.5 : 1 and quick ratio 3 : 1; if the inventory is 36,000, calculate Current Liabilities and Current Assets.

(Ans: Current Assets Rs. 1,08,000, Current Liabilities Rs. 24,000)

4) From the following information calculate:

(i) Gross Profit Ratio (ii) Inventory Turnover Ratio (iii) Current Ratio (iv) Liquid Ratio (v) Net Profit Ratio (vi) Working Capital Ratio:

Revenue from Operations	Rs. 25,20,000
Net Profit	Rs. 3,60,000
Cost of Revenue from Operations	Rs. 19,20,000
Long-term Debts	Rs. 9,00,000
Trade Payables	Rs. 2,00,000
Average Inventory	Rs. 8,00,000
Liquid Assets	Rs. 7,60,000
Fixed Assets	Rs. 14,40,000
Current Liabilities	Rs. 6,00,000
Net Profit before Interest and Tax	Rs. 8,00,000

(Ans: Gross Profit Ratio 23.81%; Inventory Turnover Ratio 2.4 times; Current Ratio 2.6 : 1; Liquid Ratio 1.27 : 1; Net Profit Ratio 14.29%; Working Capital Ratio 2.625 times)

Unit No-4 (Problems)

- 1) If you deposit Rs. 4000 at the end of every year in a bank for 4 years and the bank is paying 10% interest, **calculate** the future value of annuity.
- 2) Ayesha will retire in 20 years. This year she wants to fund an amount Rs.15, 000 to become available in 20 years. How much does she have to deposit into a pension plan earning 7% annually?
 - i) **Calculate** Present value.
- 2) If you want to have Rs. 800 at the end of each of three years. If the discount rate is 10%. What is the present value of an annuity of Rs.2,400?