

Teaching–Learning Innovations in the Finance Area

The Finance Area at **Jaipuria Institute of Management, Noida** has continuously explored new ways of making finance education more engaging, practical and relevant to today's business environment. Over the last two academic years, faculty members have introduced several teaching-learning initiatives that encourage students to learn by doing, work with professional tools, apply concepts to real situations, and develop skills that extend beyond the prescribed curriculum.

A major focus has been on creating **experiential learning opportunities**. Traditional lectures have been supplemented with activities that place students in realistic business situations where they must analyse information, make decisions and learn from the consequences of those decisions. Business simulations using **CESIM** have become an important component of several finance courses, allowing students to manage virtual companies and appreciate how financial decisions influence strategy, operations and organisational performance.

Faculty members have also experimented extensively with **gamification** to make accounting and finance concepts more interactive. In the *Accounting for Business* course, students participate in an **Accounting Escape Room**, where teams solve a series of accounting challenges to unlock successive stages of the activity. The exercise encourages collaboration, logical reasoning and application of accounting concepts in an enjoyable setting. Likewise, the *Management Accounting and Control* course includes a **manufacturing simulation**, where students work in teams to produce paper planes while preparing budgets, allocating resources, maintaining cost records and analysing profitability. These classroom activities have consistently generated enthusiastic participation while helping students understand concepts that are often perceived as abstract.

During 2025–26, the Area strengthened its industry orientation by integrating professional market platforms into classroom teaching. Through an **MoU with TradingView**, students enrolled in the *Equity Analysis and Portfolio Management* course received institutional access to the platform and learned to interpret live market data, apply technical indicators and evaluate trading strategies using professional charting tools. To support classroom learning, faculty members also created an **Equity Research Portal**, which serves as a repository of company analyses, learning resources, sector reports and reference material. Students continue to use the portal throughout the course, making learning more organised and accessible.

Recognising the growing importance of financial modelling, faculty members developed their own learning material for the **Financial Modelling and Analysis** course instead of relying exclusively on standard textbooks. The material is built around spreadsheet-based applications and real company data, enabling students to develop practical

modelling skills while understanding the assumptions behind financial forecasts and valuation models.

Artificial Intelligence has also become an integral part of the teaching-learning process. Rather than treating AI as a substitute for learning, faculty members encourage students to use it as a productivity and analytical aid. AI tools are used for literature reviews, financial analysis, report preparation, presentation design and data interpretation, while students are simultaneously trained to verify AI-generated outputs and exercise professional judgement. An **AI-powered Time Value of Money (TVM) application**, developed by the faculty, further supports self-paced learning by providing guided explanations and interactive practice for numerical problems in Corporate Finance.

The Finance Area has also introduced more field-based learning opportunities. In *Management Accounting and Control*, students undertake projects involving small businesses and local vendors, where they collect primary data, prepare budgets, analyse costs and perform break-even analysis. Working with actual businesses helps students appreciate the practical challenges faced by organisations and demonstrates how management accounting tools support decision-making.

Beyond classroom teaching, the Area has initiated measures to encourage professional development. During 2025–26, a **NISM Certification Support Fund** of ₹30,000 was created to motivate students to pursue industry-recognised certifications. Students who successfully complete eligible NISM certification programmes receive reimbursement of part of the certification fee on a first-come, first-served basis. This initiative has encouraged students to acquire additional professional credentials while reducing the financial burden associated with certification. Recently, an **MOU between NISM and Jaipuria Institute of Management, Noida** was signed, which opens the path for student exchange programs and access to advanced e-learning courses for our students.

To further strengthen practical learning, work has also begun on establishing a dedicated **Finance Laboratory**. The proposed facility will provide students with access to specialised computers equipped with professional financial platforms such as TradingView and Investing.com. Once operational, the laboratory will support classroom teaching, financial modelling, equity research, market analysis, student competitions, certification preparation and research activities. It is expected to become a shared learning resource for students across finance courses.

Taken together, these initiatives reflect the Finance Area's belief that effective management education goes beyond classroom instruction. Simulations, gamified learning, AI-enabled applications, professional software, field projects, certification support and technology-enabled infrastructure are all being used to create a richer

learning experience. While each initiative addresses a different aspect of finance education, collectively they help students develop stronger analytical ability, practical skills, technological competence and confidence to apply finance concepts in real-world situations. The continuous refinement of these practices over the last two years demonstrates the Area's commitment to improving student learning and keeping the curriculum aligned with the changing expectations of the finance profession.

Financial Analysis

Participants have to decode the financial statement of 3 different firms from the automobile industry. They will prepare a ratio analysis based on liquidity, profitability, efficiency and leverages to decide the investment. The learners have to think about the turnaround required by firms to invest in future.

Game Play Length – 1.5 hour to 2 hours

Type – Single Player

Debrief – 45 to 60 minutes

Courses – Undergraduate, Graduate, Executive

Iterations - Multiple

Product # - Assessment, Instructor access

Overview

Dupont ventures have appointed the Learner as the financial analyst to evaluate an investment opportunity in the automobile sector. The company expects the learner to study different ratios for initial findings- Liquidity Ratio, Leverage Ratio, Efficiency Ratio, Profitability Ratio and Market Value Ratio. Further, the learner is provided with the income statement, balance sheet, and other important information for all three companies to evaluate and make an informed decision. The Learner explores the investment opportunity with the use of different ratios and presents it to the management. The objective is to help the learner gain a sound understanding of Financial Analysis by applying basic accounting principles. The Learner is provided with the feedback to measure their inputs to identify the multiple dimensions of financial risks and cost of capital.

Learning Focus

- Decode the financial statements of different firms of similar industry
- Prepare your investment theory by creating common size statements and financial ratio
- Understand business nuances and what factor needs to be in favour of a successful investment

Topics Covered

- Financial statements
- Financial ratio analysis
- Financial analysis

Educational Institution Partner Program

This Educational Institution Partner Subscription Plan (the “**Service Order**”) is entered into as of the last signature date below (the “**Effective Date**”) by and between TradingView, Inc., a Delaware corporation (“**TradingView**”) and the educational institute signing this Service Order (“**Educational Institute**”).

This Service Order shall be read in conjunction with the Program Terms executed between the parties and attached hereto. Terms not defined in this Service Order will have the meaning given to them in the Program Terms. In the event of a conflict between this Service Order and the Program Terms, the Service Order shall prevail.

TRADINGVIEW INFORMATION			
TradingView Entity	TradingView, Inc.		
Address	470 Olde Worthington Road Suite 200, Westerville, Ohio, 43082		
Bank Name	Silicon Valley Bank		
Bank Address	3003 Tasman Drive, Santa Clara, CA 95054		
ABA Routing	121140399		
Account Name	TradingView Inc		
Account Number	3300938950		
Swift Code	SVBKUS6S		
TradingView Contact	Pradnil Joshi		
EDUCATIONAL INSTITUTE INFORMATION			
Education Institute Name	Jaipuria Institute of Management, Noida		
Contact Person	Sahil Narang and sahil.narang@jaipuria.ac.in		
SERVICES			
Service	Non-Professional Subscription Plans (Essential)	Non-Professional Subscription Plans (Plus)	Non-Professional Subscription Plans (Premium)
Validity Period	Three Months	N/A	N/A
Non-Professional Subscription Plan Type	Essential Plan	Plus Plan	Premium Plan
Maximum Number of Users	181	N/A	N/A
FEES AND SPECIAL TERMS			
Annual Price	Free of Charge		
Total Annual Price	Free of Charge		
Special Terms	N/A		

[Signature Page Follows]

The parties have executed this **Service Order** by duly authorized representatives as of the last date set forth below.

TradingView

TradingView, Inc.
470 Olde Worthington Rd. Ste 200
Westerville OH 43082 USA

www.tradingview.com

Notices Email: legal@tradingview.com

Educational Institute

Jaipuria Institute of Management, Noida
A-32 A, Sector-62, Institutional Area, District-
Gautam Budh Nagar,
Noida, UP-201309

<https://www.jaipuria.ac.in/noida/>

Notices Email: director.noida@jaipuria.ac.in

H Mishra

Name: Hamish Mishra (Head of Legal)
Date (MM/DD/YYYY): 8/28/2025 BST

Subhajyoti Ray

Name: Dr. Subhajyoti Ray
Title: Director
Date (MM/DD/YYYY): 8/28/2025 IST

Annex A – Register of Active Users

USER #	USER'S FULL NAME	USER'S ACADEMIC YEAR (IF STUDENT)	USER'S POSITION (IF ACADEMIC)	USER'S UNIVERSITY DOMAIN EMAIL	STUDENT ACADEMIC	/ DATE OF ACCESS (MM, YYYY)

Educational Institution Partner Program Terms

This Educational Institution Partner Program Terms (the “**Program Terms**”) are entered into as of the last signature date below (the “**Effective Date**”) by and between TradingView, Inc., a Delaware corporation (“**TradingView**”) and the educational institute signing these Program Terms (“**Educational Institute**”).

1. **Definitions.** Capitalized terms not otherwise defined herein will have the meanings set out below:

“**Confidential Information**” means any confidential information disclosed or made available by one party (“**Discloser**”) or its employees, officers, representatives or advisers (together “**Representatives**”) to the other party (“**Recipient**”) and its Representatives, whether in writing, electronically, or in any other form, that is either conspicuously identified as confidential or proprietary or should be otherwise reasonably understood as such based on the nature of the information or circumstances of the disclosure. Without limiting the generality of the foregoing, Confidential Information includes the terms and conditions of this Agreement and any non-public information regarding the business, affairs, customers, clients, suppliers, plans, intentions, market opportunities, operations, processes, product information, services, know-how, technical information or trade secrets of the Discloser.

“**Data Protection Laws**” means all applicable privacy, consumer data rights and data protection laws, regulations and rules in effect currently or at any time hereafter, such as, without limitation, the California Consumer Privacy Act of 2018, as amended by the California Privacy Rights Act of 2020 (together with implementing regulations, collectively, the “**CPRA**”).

“**End User Terms**” means the TradingView Terms of Use, currently available at <https://www.tradingview.com/policies/> (or such other URL TradingView may provide from time to time).

“**Market Data**” means information and data about financial instruments, information and data about the issuers of financial instruments, indices and/or other information and data made available from time to time as part of a Subscription Plan.

“**Services**” means the chargeable services provided by TradingView as set out in the Service Order.

“**Service Order**” means the service order agreed in writing by the parties that describes all Services and Subscription Plans.

“**TV Branding**” means any names, logos, trademarks, or other branding of TradingView or its third-party licensors and providers.

“**User**” means any (i) enrolled student of Educational Institute; or (ii) employed or contracted academic personnel of Educational Institute, authorised by TradingView and Educational Institute to access and use the Subscription Plans as specified in Annex A to the Service Order.

2. **Terms of Use.** Educational Institute is authorized to distribute the Subscription Plans to Users. User shall be permitted access to the Subscription Plan for a period of six (6) months in accordance with the applicable Service Order and subject to the End User Terms. It shall be the responsibility of Educational Institute to ensure that Users act in accordance with such requirements.
3. **Informational Requirements.** Educational Institute shall provide the following User information in order to be provided access to the Subscription Plans within five (5) days of signing the Service Order, or within fourteen (14) days on request from TradingView at any time during the Term: (i) name and academic year; (ii) title(s) and/or position(s); (iii) employment functions (if applicable); (iv) User's university-domain email; and (v) such other information requested by TradingView from time to time. The information requested under this Section shall be provided to TradingView in the form set out at Annex A to the Service Order or such other method as agreed by TradingView in writing from time to time.
4. **Marketing Requirements.** In consideration for permitted access and distribution of the Subscription Plans under the terms of this Agreement, Educational Institute shall in compliance with all applicable laws, regulations, third-party contracts, and TradingView's policies: (i) include TV Branding in a section of the Educational Institute's website in accordance with Section 6 below; and (ii) publish a blog post or news article announcing the partnership with TradingView within seven (7) days of signing of this Agreement with at least one (1) contextual backlink contained within the announcement. Additionally, Educational Institute must publish content on TradingView's platform and ensure that the use of TV Branding does not imply endorsement beyond this arrangement.

5. **Extension of Use.** User may be permitted to access the Subscription Plan for an additional period of six (6) months but for no longer than a maximum period of twelve (12) months. Educational Institute shall provide such details and information of the extended use in accordance with Section 3 above.
6. **TV Branding.** Educational Institute will include any TV Branding or related attribution notices or statements as agreed between the parties in writing (the “**Attributions**”). Educational Institute will not alter, delete, obscure, or replace any such Attributions, and will ensure each Attribution includes a link to TradingView’s website, or any alternate or successor site as designated by TradingView from time to time, without any nofollow, ugc, or sponsored link attributes. TradingView grants Educational Institute a limited right to use and display the TV Branding during the Term to: (i) comply with the requirements related to Attributions in this paragraph; and (ii) promote or advertise its partnership with TradingView. Any use of the TV Branding will comply with any trademark guidelines or brand standards published or provided by TradingView from time to time and will inure to the benefit of TradingView or its third-party licensors. Customer will immediately comply with any requests from TradingView that it discontinue or modify its use of the TV Branding.
7. **Restrictions.** The total number of User’s at any point during the Term shall not exceed the maximum number of Users as set out in the Service Order. Any Users registered for free access under the Program Terms shall be registered with the User’s university-domain email only.
8. **Term.** These Program Terms shall commence as of the Effective Date and shall continue until terminated as set forth below or until the last Service Order has expired or been terminated (the “**Term**”).
9. **Termination.** Without affecting any other right or remedy available to it, TradingView may terminate these Program Terms or the applicable Service Order: (a) if the Educational Institute materially breaches these Program Terms or such Service Order and fails to cure such breach within ten (10) days from receipt of such notice; (b) there is a repeated breach by User(s) of the End User Terms; (c) the Educational Institute suspends or ceases, or threatens to suspend or cease, carrying on all or a substantial part of its activities; (d) the Educational Institute’s financial position deteriorates so far as to reasonably justify the opinion that its ability to give effect to the terms of these Program Terms or applicable Service Order is in jeopardy; or (e) the Educational Institute stops carrying on all or a significant part of its activities, or indicates in any way that it intends to do so, or is unable to pay its debts, or becomes insolvent or an order is made or a resolution passed for the administration, winding-up or dissolution of the other (otherwise that for the purposes of a solvent amalgamation or reconstruction) or an administrative or other receiver, manager, liquidator, administrator, trustee or similar officer is appointed over all or any substantial part of the assets of the other or the other enters into or proposes any composition or arrangement with its creditors generally or any analogous event occurs in any applicable jurisdiction.
10. **Suspension and/or Termination of User.** Without prejudice to any other rights or remedies to which TradingView may be entitled under these Program Terms or the End User Terms, Educational Institute acknowledges that TradingView may immediately suspend or terminate User’s access to the Subscription Plans provided under the terms of the Service Order if: (i) it believes in good faith that User has materially breached the End User Terms; (ii) on request from the Educational Institute; or (iii) it otherwise determines in good faith that such a suspension or termination is necessary to protect the integrity and security of TradingView’s systems or information. TradingView will notify Educational Institute in writing as soon as practicable regarding the reason for such suspension or termination. TradingView will use commercially reasonable efforts to promptly restore User’s access once the underlying issue has been satisfactorily resolved.
11. **Effect of Termination.** On termination or expiration of these Program Terms for any reason, all licenses granted under these Program Terms or applicable Service Order shall immediately terminate and Educational Institute and the Users will immediately discontinue its use of the Subscription Plans. If these Program Terms are terminated by TradingView pursuant to Section 9, TradingView reserves the right to refund (where applicable) any prepaid amounts on a pro rata basis corresponding to the period after such termination in respect of such Service Order at its sole discretion. Termination or expiration of these Program Terms will not affect any liabilities accrued prior to the effective date of expiration or termination (including any obligation to pay previously accrued amounts). Sections 12, 13, 14, 17 through to 21 will survive any termination or expiration hereof.
12. **Audit Rights.** The Educational Institute shall keep and maintain for a period of at least two (2) years after the date of the Initial Term and each renewal period thereafter, all appropriate books and records relating to the Users provided with access during the Term (“**Records**”). TradingView may, by providing fifteen (15) days’ prior written notice to Educational Institute, ask Educational Institute to provide any information reasonably required for the purpose of verification of the Records. For the avoidance of doubt, TradingView

acknowledges and accepts that this Section shall in no way be construed as to create a right for TradingView or any third party to access and audit any other documentation or information other than any documentation or information as is reasonably necessary to reasonably assess the Educational Institute's compliance with these Program Terms.

13. **Indemnification by Educational Institute.** Educational Institute shall defend, indemnify and hold harmless TradingView against any claims, actions, proceedings, losses, damages, expenses and costs (including without limitation reasonable legal fees) arising out of or in connection with any Educational Institute's use of the Services, actions of or claims by Users, Educational Institute's breach of these Program Terms or, if applicable, arising out of or resulting from the Educational Institute's failure to comply with its Market Data compliance obligations under these Program Terms.
14. **Indemnification by TradingView.** TradingView shall defend, indemnify and hold harmless Educational Institute against any third-party claims that the use of the Services in accordance with these Program Terms infringes any third-party IP Right. TradingView shall not have any indemnity obligations or other liability for any alleged infringement based on: (i) modification of the Services by anyone other than TradingView; (ii) use of the Services other than in accordance with these Program Terms or TradingView's instructions; (iii) use of the Services after notice of any alleged or actual infringement from TradingView; (iv) combination of the Services with any hardware, software, data, content, or materials not provided by TradingView; or (v) TradingView's conformance with Educational Institute's specific requirements or instructions.
15. **Disclaimers.** EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, CUSTOMER'S AND THE USERS USE OF THE SERVICES AND SUBSCRIPTION PLANS ARE ITS SOLE RISK THE SERVICES AND SUBSCRIPTION PLANS ARE PROVIDED ON AN "AS IS" AND "AS AVAILABLE" BASIS. TRADINGVIEW AND ITS AFFILIATES AND PROVIDERS EXPRESSLY DISCLAIM ALL WARRANTIES OF ANY KIND RELATED TO THE SERVICES AND TV CONTENT, WHETHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND NON-INFRINGEMENT, THAT THE SERVICES OR TV CONTENT WILL BE UNINTERRUPTED OR ERROR-FREE, THAT ANY OUTPUT OR USE OF THE SERVICES WILL BE ACCURATE OR RELIABLE, THAT DEFECTS WILL BE CORRECTED, OR THAT THE SERVICES WILL SUPPORT OR WILL OPERATE WITH ANY PARTICULAR SOFTWARE OR HARDWARE CONFIGURATION. IN NO EVENT WILL TRADINGVIEW BE LIABLE FOR ANY ALLEGED DAMAGES OR CLAIMS ARISING OUT OF ANY SERVICES OR SUBSCRIPTION PLAN. TRADINGVIEW IS NOT RESPONSIBLE FOR ANY PROBLEMS OR TECHNICAL MALFUNCTION OF ANY ELECTRONIC NETWORK OR LINES, SERVERS, SOFTWARE, OR FAILURE OF TRANSMISSION AS A RESULT OF TECHNICAL PROBLEMS OR TRAFFIC CONGESTION ON THE INTERNET OR ON THE SERVICES OR SUBSCRIPTION PLAN, INCLUDING ANY INJURY OR DAMAGE TO ANY PERSON'S COMPUTER RESULTING FROM USE OF THE SERVICES OR SUBSCRIPTION PLAN.
16. **Limitation of Liability.** TO THE MAXIMUM EXTENT PERMITTED BY LAW, IN NO EVENT WILL TRADINGVIEW BE LIABLE FOR (A) ANY CONSEQUENTIAL, INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE OR EXEMPLARY DAMAGES, INCLUDING BUT NOT LIMITED TO ANY LOSS OF PROFIT, LOSS OF BUSINESS, LOSS OF GOODWILL, LOSS OF OR CORRUPTION OF DATA OR OTHERWISE RESULTING FROM THE USE OF OR INABILITY TO USE THE SERVICES OR SUBSCRIPTION PLANS, UNDER ANY LEGAL THEORY WHATSOEVER (INCLUDING TORT, CONTRACT, STRICT LIABILITY, OR OTHERWISE), AND EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES; OR (B) ANY TOTAL AGGREGATE LIABILITY ARISING OUT OF OR RELATING TO THIS AGREEMENT IN EXCESS OF THE TOTAL FEES PAID BY CUSTOMER DURING THE TWELVE (12) MONTHS IMMEDIATELY PRECEDING THE DATE ON WHICH THE CLAIM AROSE.
17. **Data Protection and Privacy.** The parties acknowledge that where data is shared for the operation of the Subscription Plans, each party agrees that it shall at all times during the term of the Program Terms and Service Order, comply with
18. **Data Protection Laws.** TradingView will maintain appropriate administrative, physical, and technical safeguards for the protection of the security, confidentiality and integrity of the personal information of its users and Educational Institute's data, as described in TradingView's privacy policy which can be found at www.tradingview.com/privacy-policy (or such other URL as may be amended from time to time).
19. **Confidentiality.** Recipient will only use Confidential Information to perform its obligations or exercise its rights under this Agreement. Recipient will not disclose Confidential Information to any third parties, except that TradingView may disclose Confidential Information to its and its affiliates' officers, employees, agents, and representatives who have a need to know such Confidential Information for the purposes of fulfilling its

obligations under the Program Terms or applicable Service Order and who are bound by confidentiality obligations at least as protective as those set forth herein. Recipient will maintain the Confidential Information in confidence using the same degree of care as it uses to protect its own similar information (but no less than reasonable care) and will be liable for any unauthorized use or disclosure of the Confidential Information, including by any of its personnel. The protections set forth herein will continue to apply to any Confidential Information disclosed during the Term for the greater of five years from disclosure, or so long as such Confidential Information is protected as a trade secret under applicable law. Each party shall take all reasonable steps to ensure that the other's Confidential Information to which it has access is not disclosed or distributed by its employees or agents in violation of this Agreement. A party may disclose Confidential Information to the extent such Confidential Information is required to be disclosed by law, by any governmental or other regulatory authority or by a court or other authority of competent jurisdiction, provided that, to the extent it is legally permitted to do so, it gives the other party as much notice of such disclosure as possible and takes into account the reasonable requests of the other party in relation to the content of such disclosure.

20. **Redistributor of Market Data.** In its capacity as a redistributor of Market Data from exchanges for end users, TradingView hereby agrees to facilitate access by of Market Data in the specified quantity agreed by both the parties upon a request from the Educational Institute. The Market Data shall only be used in conjunction with the Subscription Plans purchased as part of an applicable Service Order. Any such Market Data access requested under this Section shall be provided by the Educational Institute in the form set out at Annex A to the Service Order.
21. **TradingView Market Data Compliance.** TradingView shall ensure that all access to, use of, and redistribution of purchased Market Data through the Subscription Plans complies with all applicable laws, regulations, including securing appropriate licensing to use and display exchange data in production and non-production environments. The use of the Market Data provided under the terms of this Section are subject to the End User Terms.
22. **Educational Institute Market Data Compliance.** The Educational Institute shall ensure that all access to, use of, and redistribution of additional Market Data requested through the Service Order at no additional cost complies with all applicable laws, regulations, including securing appropriate licensing from relevant domestic exchanges or third-party providers. The Educational Institute agrees to use the Market Data under the Subscription Plans solely for the purposes permitted under these Program Terms and applicable Service Order and as authorized by the appropriate third-party provider. The Educational Institute acknowledges and agrees that TradingView bears no responsibility for the compliance of the Market Data provided through the Services and shall solely be responsible for any violations of applicable laws, exchange terms, or licensing concerning the provision of such data.
23. **Precedence.** In the event of any conflict between the terms of the body of this Program Terms and those of the End User Terms, the terms of the Program Terms will govern as relates to the specific Subscription Plans described in such Service Order.
24. **Governing Law.** These Program Terms, the Service Order, and any dispute or claim (including non-contractual disputes or claims) arising out of or in connection with it or its subject matter or formation, shall be governed by, and construed in accordance with, the laws of the State of New York, USA, without regards to conflicts of laws principles.
25. **Assignment.** Educational Institute will not assign or transfer these Program Terms without TradingView's prior written consent. TradingView may assign or transfer these Program Terms to an affiliate or the surviving or successor entity in the event of a merger, stock sale, or sale of substantially all assets. Subject to the foregoing, these Program Terms will be for the benefit of, and binding upon, each party's permitted successors and assigns.
26. **Force Majeure.** Except for payment obligations, neither party will be liable for any delays or failures to perform to the extent due to a cause beyond such party's reasonable control, which may include without limitation, strikes, acts of God, epidemics, pandemics or other outbreak of infectious disease or other public health crisis (and any government response to them, including quarantine or other employee restrictions), war, terrorism, riot, denial of service attacks, or compliance with any law or governmental order ("Force Majeure Event").
27. **Notices.** Unless otherwise set forth in the applicable Service Order, all communications relating to these Program Terms shall be in writing and sent to the address indicated below the applicable party's signature at the end of these Program Terms.

28. **Amendments.** No modification of or amendments to these Program Terms shall be effective unless in writing and signed by authorized representatives of both parties.
29. **Waiver.** No failure or delay by a party to exercise any right or remedy provided under these Program Terms or by law shall constitute a waiver of that or any other right or remedy, nor shall it prevent or restrict the further exercise of that or any other right or remedy. No single or partial exercise of such right or remedy shall prevent or restrict the further exercise of that or any other right or remedy.
30. **Severability.** If any provision of these Program Terms is or becomes invalid, illegal or unenforceable, it shall be deemed modified to the minimum extent necessary to make it valid, legal and enforceable. If such modification is not possible, the relevant provision shall be deemed deleted. Any modification to or deletion of a provision under this paragraph shall not affect the validity and enforceability of the rest of these Program Terms.
31. **Relationship.** Each of the parties to these Program Terms is an independent contractor and nothing contained in these Program Terms shall be construed to imply that there is any relationship between the parties of agents or of principal/agent or of employer/employee nor are the parties hereby engaging in a joint venture and accordingly neither of the parties shall have any right or authority to act on behalf of the other nor to bind the other by contract or otherwise, unless expressly permitted by the terms of these Program Terms.
32. **No Third-Party Beneficiaries.** These Program Terms are intended for the benefit of the parties hereto and their respective permitted successors and assigns, and is not for the benefit of, nor may any provision hereof be enforced by, any other person or entity except as expressly set forth herein.
33. **Entire Agreement.** These Program Terms, the applicable Service Order and Annexes, constitutes the entire agreement between the parties and supersedes and extinguishes all previous agreements, promises, assurances, warranties, representations and understandings between them, whether written or oral, relating to its subject matter.
34. **Counterparts.** These Program Terms may be executed in any number of counterparts, each of which when executed shall constitute a duplicate original, but all the counterparts shall together constitute the one agreement.

[Signature Page Follows]

The parties have executed these **Program Terms** by duly authorized representatives as of the last date set forth below.

TradingView

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Educational Institute

Jaipuria Institute of Management, Noida
A-32 A, Sector-62, Institutional Area, District-
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Noida, UP-201309

<https://www.jaipuria.ac.in/noida/>

Notices Email: director.noida@jaipuria.ac.in

H Mishra

Name: Hamish Mishra (Head of Legal)
Date (MM/DD/YYYY): 8/28/2025 BST

Subhajyoti Ray

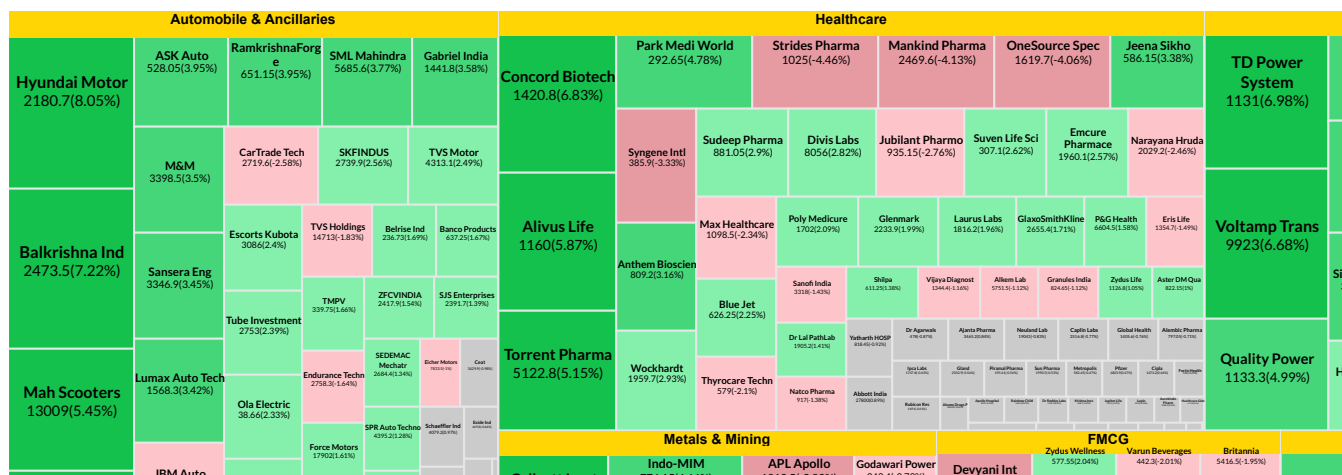
Name: Dr. Subhajyoti Ray
Title: Director
Date (MM/DD/YYYY): 8/28/2025 IST

Course Outline

Discussion Forum

1D 5D 1M 3M 6M 1Y 5Y YTD

As on 3:59
PM | 31
Jul 2026

Select Sectors 



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Trading Economics International Outlook

TRADING ECONOMICS



Oil Rally Extends in July

Oil prices surged more than 20% in July, the most since March, with Crude oil rising to around \$85 a barrel and Brent nearing \$88. Middle East conflict risks intensified after Iran said it struck two tankers in Hormuz, while Black Sea attacks and CPC export concerns added to supply fears.

Technical Analysis: Trading View



External and Other Links
[NISM Notes](#)
[Aswath's Variable Definitions](#)

Home

Assessment

Job Preparation

Classes

Data

Quizzes

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The Grameen App Project: Navigating Capital Budgeting and Risk in Tech Entrepreneurship

Part I: The Mechanics of Investment Decisions

Every day, corporate boards, venture capitalists, and entrepreneurs face a fundamental question: where should we allocate our limited resources? In the realm of project finance, this process is known as **capital budgeting**. It is the rigorous method by which organizations evaluate potential major projects or investments to determine if they will generate enough cash flow to justify their initial cost.

To answer this, financial analysts rely on a toolkit of evaluation methods:

- **Net Present Value (NPV):** The gold standard of project evaluation. NPV discounts all future cash inflows and outflows back to their present-day value using a specific discount rate (usually the cost of capital). A positive NPV indicates a project is expected to add value to the firm.
- **Internal Rate of Return (IRR):** This is the discount rate that makes the NPV of a project exactly zero. It represents the annualized effective compounded return rate. While intuitive, it can sometimes present multiple values or misleading results for projects with unconventional cash flows.
- **Payback Period:** The simplest metric, measuring how long it takes for a project to "break even" and recover its initial investment. While it ignores the time value of money, it is highly useful for assessing liquidity risk.

However, a model is only as good as its assumptions. Real-world business environments are dynamic, and baseline projections rarely unfold exactly as planned. This is why **sensitivity analysis** is critical. By systematically changing key variables—such as sales volume, operating costs, or inflation rates—analysts can observe how sensitive the project's bottom line is to external shocks. It shifts the conversation from "What is our expected return?" to "What is our risk of failure?"

Part II: The Grameen App Dilemma

Rohan and Priya are two tech entrepreneurs who recently won a preliminary mandate to develop the "Grameen App," an agricultural platform supported by a regional government initiative. The app is designed to provide real-time weather updates, local market pricing, and modern farming techniques directly to rural communities.

While the concept has been enthusiastically approved, securing the final government grant requires a robust five-year financial budget and a comprehensive risk assessment. Rohan and Priya have gathered a mountain of quotes and operational estimates, but they are struggling to organize them into a coherent financial model that will satisfy the government's rigorous review board. They have hired you as a financial consultant to

translate their raw assumptions into a structured capital budget and conduct a sensitivity analysis.

The Initial Investment (Year 0) To get the project off the ground, Rohan commissioned a preliminary market survey that cost Rs. 250,000. Alongside this, Priya handled the formal company incorporation, which involved a one-time fee of Rs. 30,000.

Building the app requires a specialized development team for the first year. They plan to hire one team lead earning Rs. 100,000 per month, one senior developer at Rs. 75,000 per month, and three junior developers at Rs. 40,000 per month each. To equip this core team, they will purchase four high-end MacBook Pros priced at Rs. 160,000 each. For tax and accounting purposes, these laptops will depreciate at a 40% annual rate using the written-down value method.

Getting the application onto the major app stores requires a one-time registration and deployment fee of Rs. 10,000. Finally, to ensure their target audience is ready for launch, they have budgeted an initial awareness campaign of Rs. 50,000.

Operations and Revenue Phase (Years 1 to 5) Once the app goes live, the business model shifts from development to maintenance and monetization. The large development team will be scaled back to a lean post-launch crew consisting of just one senior developer and one junior developer. To account for inflation and talent retention, these maintenance salaries will include an immediate 3% increment over their base development rates starting in Year 1, compounding annually thereafter. They also plan to maintain a modest but consistent ongoing marketing presence, costing Rs. 10,000 every year.

On the revenue side, Priya has secured two primary streams:

- **Ad Revenue:** In-app advertisements are projected to yield Rs. 10 per click, with an estimated 15,000 clicks per month.
- **Merchandise:** They plan to sell branded agricultural merchandise, forecasting sales of 1,000 units per month at a profit margin of Rs. 100 per unit.

Given the rapid growth in smartphone penetration in rural areas, Priya conservatively estimates that both revenue streams will grow by 5% each year.

Part III: Navigating Uncertainty

Just as Rohan and Priya finalize their baseline projections, the regional government's review board throws a curveball. The board members know that a flat 5% growth rate and perfectly predictable costs rarely happen in the real world. To secure the final grant approval, the budget must be stress-tested against potential risks.

The board has requested a sensitivity analysis focusing on three distinct vulnerabilities:

1. **User Adoption Rates (Ad-Click Volume):** The assumption of 15,000 clicks per month assumes immediate trust in the app. What happens if rural adoption is slower than anticipated?
 - *Scenario A:* Adjust the Year 1 baseline down to 10,000 clicks per month.
2. **Market Saturation (Revenue Growth):** A 5% annual growth in digital advertising assumes a booming local economy. If penetration plateaus, growth could stagnate.
 - *Scenario B:* Flex the annual growth rate for both ad revenue and merchandise sales down to 2%.
3. **The Talent War (Wage Inflation):** The baseline model assumes a modest 3% annual salary increment for the post-launch maintenance team. However, the tech job market is fiercely competitive.
 - *Scenario C:* Increase the annual salary increment from 3% to 8% to reflect a high-inflation talent market.

Part IV: The Assignment

Your task is to build a comprehensive five-year financial projection.

1. **The Baseline Model:** Construct a clean budget that clearly separates the initial capital outlay from the operational cash flows. Ensure your schedules accurately reflect the depreciation of the IT equipment and the compounding growth rates of both salaries and revenue streams. Calculate the total net cash flow for each year.
2. **The Sensitivity Panel:** Create a dedicated "Sensitivity Analysis" section in your workbook. Demonstrate how sensitive the ending cash balance is to the three changing variables (Scenarios A, B, and C) compared to your baseline.
3. **Executive Recommendation:** Based on the fundamentals of capital budgeting, write a brief, one-page summary recommending whether the project is financially sustainable and which risk factor poses the greatest threat to its long-term viability.

Corporate Finance Interactive Labs

[Time Value of Money](#)[Capital Budgeting](#)[Capital Structure](#)[Cost of Capital](#)[Leverage Game](#)[Dividend Decision](#)[Working Capital](#)

Explore how the value of money changes over time. Adjust the inputs to see instant calculations.

Inputs

[Calculate Future Value \(FV\)](#)[Calculate Present Value \(PV\)](#)

Initial Amount (\$):

Annual Rate (%): **5**



Number of Periods (Years):

Compounding Frequency:



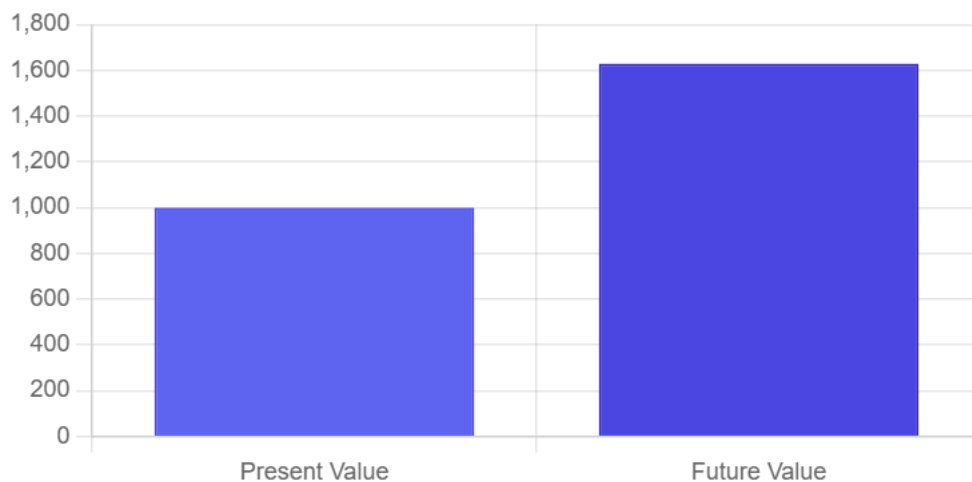
Results

Present Value (PV)

N/A (Calculating FV)

Future Value (FV)

\$1628.89



Race Against Time: Loan Repayment Scenario

Imagine you need to pay off a **\$10,000** loan in 5 years. Use the sliders below to see how the required annual payment changes based on the interest rate.

Loan Interest Rate (%): **5**



Loan Periods (Years):

5

Required Annual Payment

\$2264.55

Capital Budgeting – Practice Questions

(Questions with answer space)

Question 1

What are the issues that need to be considered by an Indian investor and incorporated within the Net Present Value (NPV) model for the evaluation of foreign investment proposals?

Question 2

Distinguish between Net Present-value and Internal Rate of Return.

Question 3

Write short note on Certainty Equivalent Approach.

Question 4

What is the sensitivity analysis in Capital Budgeting?

Question 5

Write short note on Social Cost Benefit analysis.

Question 6

Comment briefly on the social cost benefit analysis in relation to evaluation of an Industrial project.

Question 7

Write a brief note on project appraisal under inflationary conditions.

Question 8

What is Capital rationing?

Question 9

Explain the concept 'Zero date of a Project' in project management.

Question 10

What are the steps for simulation analysis?

Question 11

Explain in brief the contents of a Project Report.

Question 12

XYZ Ltd., an infrastructure company is evaluating a proposal to build, operate and transfer a section of 35 kms of road at a project cost of 200 crores to be financed as: Equity Share Capital 50 crores; Loans @15% The road will collect toll for 15 years; maintenance to be done during the period. At end of year 15, the road will be handed over to authorities at zero value.

Estimated: Toll revenue = 50 crores per annum; Annual toll collection + maintenance = 50 crores; Total project cost written off in 15 years straight-line. Tax depreciation @10% Loan to be repaid in 15 equal instalments (principal + interest).

Required: Compute Project IRR and Equity IRR. Ignore corporate tax. Explain difference.

Question 13

ABC Chemicals evaluates two waste disposal systems:

	System A	System B
Initial Investment Outlay	5 million	4 million
Annual Operating Costs	1.5 million	1.6 million
Salvage Value	1 million	0.5 million

Hurdle rate = 15

PVIF @15: 0.8696, 0.7561, 0.6575, 0.5718, 0.4972, 0.4323

Required: Which system should ABC Chemicals choose?

Question 14

X Ltd is planning a new product (8-year life). Initial equipment cost = 120 lakhs Additional equipment at year-3 = 10 lakhs Resale at year-8: original equipment = removal cost; additional = 1 lakh Working capital needed = 15 lakhs

Production capacity = 4,00,000 units p.a. Estimated utilisation:

Year	Capacity (%)
1	20
2	30
3-5	75
6-8	50

Sale price = 100 per unit, P/V ratio = 60 Fixed operating cash cost = 16 lakhs/year

Advertisement expenditure:

Year	Expenditure (lakhs)
1	30
2	15
3-5	10
6-8	4

Tax rate = 50 Straight-line depreciation allowed for tax Cost of capital = 12

Required: Should the project be accepted?

Question 15

DL Services considers buying a mechanised sewerage cleaning machine.

- Machine cost: 20 lakhs; life: 10 years
- Depreciation: 20% p.a. straight-line
- Operating cost: 5 lakhs p.a.
- Present system: 200 labourers @10,000 per person per annum
- After-tax cost of funds: 10%
- Tax rate: 35%

Required: (i) Is the purchase advisable? (ii) Compute savings/additional cost from purchase.

Question 16

Skylark Airways plans to acquire an aircraft for 50,00,000.

Expected CFAT:

Year	CFAT (Rs)	Probability
1	14,00,000	0.10
	18,00,000	0.20
	25,00,000	0.40
	40,00,000	0.30
2	15,00,000	0.10
	20,00,000	0.30
	32,00,000	0.40
	45,00,000	0.20
3	18,00,000	0.20
	25,00,000	0.50
	35,00,000	0.20
	48,00,000	0.10

Required: (i) Expected NPV @6(ii) Standard deviation (iii) Role of SD in capital budgeting

Question 17

(a) Cyber Company evaluates two mutually exclusive projects:

Situation	Probability	Project A (Rs)	Project B (Rs)
Good	0.30	600000	500000
Normal	0.40	400000	400000
Worse	0.30	200000	300000

Cost of capital = 7

(b) Additional data:

Project	Expected NPV (Rs)	SD (Rs)
X	122000	90000
Y	225000	120000

Required: (i) Which project? (ii) Using coefficient of variation? (iii) Which measure is better?

Question 18

Project X and Y under evaluation.

Project X: Investment = 70 lakhs Cash flows under different states:

Year	CF1 (lakhs)	CF2 (lakhs)	CF3 (lakhs)
1	30	50	65
2	30	40	55
3	30	40	45

Project Y: Investment = 80 lakhs Probability-weighted cash flows:

Probability	Cash Flow (lakhs)
0.20	40
0.50	45
0.30	50

Required: (a) Compare NPV @10(b) Compute SD analyse risk

Question 19

Shivam Ltd evaluates two projects:

Project A NPV	15000	12000	6000	3000
Probability	0.20	0.30	0.30	0.20
Project B NPV	15000	12000	6000	3000
Probability	0.10	0.40	0.40	0.10

Required: (i) Expected NPV (ii) SD (iii) Profitability index (iv) Which project is recommended?

Question 20

Aeroflot Airlines evaluates a proposal costing 50 lakhs. CFAT:

Year	CFAT (lakhs)	Probability
1	15, 18, 22, 35	0.10, 0.20, 0.40, 0.30
2	15, 20, 30, 45	0.10, 0.30, 0.40, 0.20
3	18, 22, 35, 50	0.20, 0.50, 0.20, 0.10

Required: (i) Expected NPV @6(ii) Deviation from expected values

Question 21

Following are the estimates of the net cash flows and probability of a new project of M/s X Ltd.:

Year	P = 0.3	P = 0.5	P = 0.2
Initial investment (Year 0)	400000	400000	400000
Net after-tax cash inflow (Years 1–5)	100000	110000	120000
Salvage value (Year 5)	20000	50000	60000

Required rate of return = 10%.

Required: (i) Expected NPV (ii) Best case and worst case NPVs (iii) Probability of worst case if cash flows are perfectly dependent vs. independent (iv) Standard deviation and coefficient of variation (v) Given firm's CV range = 0.95–1.00, should the project be accepted?

Question 22

XYZ Ltd. is considering a project with:

Initial cost	10,00,000
Sales price/unit	60
Cost/unit	40
Sales volume Year 1	20,000 units
Sales volume Year 2	30,000 units
Sales volume Year 3	30,000 units
Discount rate	10%

Required: Sensitivity analysis w.r.t (a) Sales price per unit (b) Unit cost (c) Sales volume (d) Initial outlay (e) Project lifetime
(Taxation ignored)

Question 23

From the following details analyse the sensitivity of the project w.r.t. initial cost, annual cash inflow and cost of capital:

Initial project cost	1,20,000
Annual cash inflow	45,000
Project life (years)	4
Cost of capital	10%

Use annuity factors: 10% $\rightarrow$ 3.169 11% $\rightarrow$ 3.103

Required: Which factor is the most sensitive?

Question 24

Red Ltd. is considering a project:

Year	Recurring Cost	Savings
0	Plant cost = 10,000	
1	4000	12000
2	5000	14000

Cost of capital = 9% PV factors @9%: Year 1 = 0.917 Year 2 = 0.842

Required: Measure sensitivity of plant value, running cost and savings (each taken one by one) such that NPV becomes zero. Which factor is most sensitive?

Question 25

Easygoing Co. Ltd. is considering a new project "Survival". IRR = 16%, life = 5 years. Sensitivity analysis gives: Annual fixed cost sensitivity = 7.8416% Cost of capital sensitivity = 60%

Other details: P/V Ratio = 70% Variable cost = 60 per unit Annual cash flow = 57,500
Tax and depreciation ignored.

Cumulative discount factor for 5 years:

Rate (%)	CDF
8	3.993
9	3.890
10	3.791
11	3.696
12	3.605
13	3.517
14	3.433
15	3.352
16	3.274
17	3.199
18	3.127

Required: (i) Initial investment (ii) NPV (iii) Annual fixed cost (iv) Estimated annual units sold (v) Break-even units

Question 26

XY Ltd. evaluates an investment requiring 1,00,000. Probability distribution:

Annual Cash Inflow	Probability
20,000	0.1
30,000	0.7
40,000	0.2

Terminal values:

Terminal Value	Probability (linked)
0	0.1
20,000	0.7
30,000	0.2

Project life = 5 years Discount rate = 20%

Required: (i) Probable NPV (ii) Worst-case NPV probability (iii) Best-case NPV probability (iv) Comment on acceptability

Question 27

The Textile Manufacturing Co. Ltd. considers two mutually exclusive proposals:

Costs: Project M = 8,50,000 Project N = 8,25,000 Certainty-equivalent approach used.
Risk-free rate = 6%.

Year	M Cash Flow	M C.E.	N Cash Flow	N C.E.
1	4,50,000	0.8	4,50,000	0.9
2	5,00,000	0.7	4,50,000	0.8
3	5,00,000	0.5	5,00,000	0.7

PV factors @6%: Year 1 = 0.943, Year 2 = 0.890, Year 3 = 0.840

Required: (i) Which project should be accepted? (ii) Under RADR method, which project gets higher discount rate and why?

Question 28

Determine risk-adjusted NPV of Projects X, Y, Z:

	X	Y	Z
Net cash outlay	210000	120000	100000
Project life (years)	5	5	5
Annual cash inflow	70000	42000	30000
Coefficient of variation	1.2	0.8	0.4

Risk-adjusted rate based on CV:

CV	Rate (%)	PV Factor (Years 1–5)
0.0	10	3.791
0.4	12	3.605
0.8	14	3.433
1.2	16	3.274
1.6	18	3.127
2.0	22	2.864
2.0	25	2.689

Question 29

New Projects Ltd. evaluates three projects:

	P-I	P-II	P-III
Cost	15,00,000	11,00,000	19,00,000
Year 1 inflow	6,00,000	6,00,000	4,00,000
Year 2 inflow	6,00,000	4,00,000	6,00,000
Year 3 inflow	6,00,000	5,00,000	8,00,000
Year 4 inflow	6,00,000	2,00,000	12,00,000
Risk Index	1.80	1.00	0.60

Minimum required return = 15% Tax rate = 40% Risk-free interest rate = 10%

Required: (i) Compute RADR (ii) Which project is best?

Question 30

A firm has projected:

Year 0	-70 lakhs
Year 1	+30 lakhs
Year 2	+40 lakhs
Year 3	+30 lakhs

These cash flows already include inflation. Cost of capital = 10% Expected inflation rate = 5%

Required: Show how viability is evaluated.

Question 31

Shashi Co. Ltd has projected the following cash flows from a project under evaluation:

Year	Cash Flow (Rs lakhs)
0	-72
1	30
2	40
3	30

The above cash flows have been made at expected prices after recognizing inflation. The firm's cost of capital is 10%. The expected annual rate of inflation is 5%.

Show how the viability of the project is to be evaluated. PVF at 10% (Years 1–3): 0.909, 0.826, 0.751.

Question 32

A firm has an investment proposal requiring an outlay of Rs 80,000 with two years' life and no salvage value. Probability distribution of cash inflows:

Cash Inflow Year 1	Probability	Cash Inflow Year 2
50,000	0.40	24,000 (0.20)
		32,000 (0.30)
		44,000 (0.50)
60,000	0.60	40,000 (0.40)
		50,000 (0.50)
		60,000 (0.10)

Discount rate = 10%.

Required: (i) Construct decision tree (ii) NPV if worst outcome occurs and probability (iii) Best outcome and probability (iv) Should the project be accepted?
(Discount factors @10%: 0.909 for Year 1, 0.826 for Year 2)

Question 33

Big Oil is evaluating whether to drill for oil. Prospects:

Depth (feet)	Total Cost (Million \$)	Cumulative Probability	PV of Oil if Found (Million \$)
2,000	4	0.5	10
4,000	5	0.6	9
6,000	6	0.7	8

Draw a decision tree showing the successive drilling decisions. How deep should the firm drill?

Question 34

The total market value of equity of O.R.E. Company is Rs 60,00,000 and debt value is Rs 40,00,000. Beta of stock = 1.5, Market risk premium = 10%, Treasury bill rate = 8%.

Required: 1. Beta of company's existing portfolio 2. Cost of capital and discount rate for expansion

Question 35

Utility table:

Cash Flow (Rs)	Utility
-15,000	-100
-10,000	-60
-4,000	-3
0	0
15,000	40
10,000	30
5,000	20
1,000	10

Project A:

Cash Flow	Probability
-15,000	0.10
-10,000	0.20
15,000	0.40
10,000	0.20
5,000	0.10

Project B:

Cash Flow	Probability
-10,000	0.10
-4,000	0.15
15,000	0.40
5,000	0.25
10,000	0.10

Which project should be selected and why?

Practice

Question 36

A gold mine requires Rs 10,00,000 to reopen. Extraction: 1,000 ounces/year for 3 years. Gold price: Rs 5,000/ounce; year-to-year $\pm$ Rs 500 with equal probability. Extraction cost per ounce = Rs 4,600. Discount rate = 10%.

Required: (a) Should mine be opened now or after 1 year? (b) Value of abandonment option

Question 37

A & Co. evaluating replacement vs overhauling.

Replacement machine: - Cost = Rs 90,000 - Maintenance = Rs 10,000 per year - Salvage after 8 years = Rs 20,000

Existing machine:

Year	Maintenance (Rs)	Salvage (Rs)
Present	0	40,000
1	10,000	25,000
2	20,000	15,000
3	30,000	10,000
4	40,000	0

Opportunity cost of capital = 15%. When should company replace the machine?

Question 38

A machine used on a production line must be replaced every four years. Costs:

Age (years)	Purchase Price	Maintenance	Repair	Scrap Value
0	60,000	-	0	32,000
1	-	16,000	4,000	24,000
2	-	18,000	8,000	16,000
3	-	20,000	16,000	8,000
4	-	20,000	-	-

PV factors @15%: 0.8696, 0.7561, 0.6575, 0.5718. Determine optimal replacement cycle.

Question 42

Agritech Ltd. must choose between two tractors. Both cost Rs 3,00,000 today.

Year	Tractor A CF	Tractor B CF
1	1,80,000	1,00,000
2	1,80,000	1,50,000
3	-	2,00,000

Costs constant in real terms. WACC = 10%. Which tractor should be selected using replacement chain method?

=====

Question 40

A company is evaluating two mutually exclusive machines:

Year	Machine X	Machine Y
0	-50,000	-60,000
1	30,000	35,000
2	30,000	40,000
3	30,000	-

Machine X life = 3 years; Machine Y life = 2 years. Cost of capital = 10%.

Evaluate using: (a) Replacement chain method (b) Equivalent annual annuity (EAA)

Cost of Capital – Question Bank (Conceptual Questions)

Q1. Define cost of capital? Why is it important? Discuss the role of cost of capital in financial decision making.

Q2. Explain the concept of explicit and implicit cost of capital.

Q3. What are the components of the cost of capital? Explain each one briefly.

Q4. Discuss the factors affecting the cost of capital.

Q5. Write a note on cost of retained earnings. How is it different from cost of equity?

Q6. Explain the concept of weighted average cost of capital (WACC). Why is WACC considered an important benchmark?

Q7. What are the problems in the measurement of cost of capital?

Q8. Discuss the features of an appropriate capital structure. How is cost of capital relevant?

Q9. Distinguish between marginal cost of capital and average cost of capital.

Q10. How does leverage influence the cost of capital? Explain operating and financial leverage in this context.

Cost of Capital – Numerical Questions

Q1. P.11.16 Three companies A, B and C are in the same business and hence have similar operating risks. However, the capital structure of each of them is different. The following are the details:

Particulars	A	B	C
Equity share capital (Rs)	4,00,000	2,50,000	5,00,000
Market value per share (Rs)	15	20	12
Dividend per share (Rs)	2.70	4	2.88
Debentures (Rs)	Nil	1,00,000	2,50,000
Market value per debenture (Rs)	–	125	80
Interest rate (%)	–	10	8

Assume the current levels of dividends are generally expected to continue indefinitely and the income-tax rate is 35 per cent. You are required to compute the weighted average cost of capital (k_0) of each company.

Q2. P.11.17 As a financial analyst of a large electronics company, you are required to determine the weighted average cost of capital of the company using: (a) book value weights and (b) market value weights.

The company's present book value capital structure is:

Debentures (Rs 100 per debenture): Rs 8,00,000 Preference shares (Rs 100 per share): Rs 2,00,000 Equity shares (Rs 10 per share): Rs 10,00,000 **Total: Rs 20,00,000**

Recent market prices: Debentures Rs 110 per debenture, Preference shares Rs 120 per share, Equity shares Rs 22 per share.

Anticipated external financing opportunities are: (i) Rs 100 per debenture redeemable at par; 10-year maturity; 11(ii) Rs 100 preference share redeemable at par; 10-year maturity; 12(iii) Equity shares: Rs 2 per share flotation costs; sale price Rs 22.

The dividend expected on the equity share at the end of the year is Rs 2 per share; the growth rate is 7

Compute WACC using book value and market value weights.

Q3. Lancaster Engineering Inc. (LEI) has the following optimal capital structure:

Debt	25%
Preferred stock	15%
Common equity	60%
Total	100%

LEI's expected net income = \$34,285.72; dividend payout ratio = 30%; federal-plus-state tax rate = 40%; investors expect dividends to grow at 9%. Last dividend = \$3.60; current stock price = \$54.

External financing: • Preferred: Dividend \$11; sale price \$95. • Debt: Interest rate 12

Required: (a) Determine cost of each capital component. (b) Compute WACC. (c) LEI has the following average-risk projects:

Project	Cost at t = 0	Rate of Return
A	\$10,000	17.4%
B	20,000	16.0%
C	10,000	14.2%
D	20,000	13.7%
E	10,000	12.0%

Which projects should LEI accept? Why?

Q4. The Heuser Company's currently outstanding bonds have a 10% coupon and a 12% yield to maturity. Heuser believes it could issue new bonds at par that would provide a similar yield to maturity. If its marginal tax rate is 35%, what is Heuser's after-tax cost of debt?

Q5. Tunney Industries can issue perpetual preferred stock at a price of \$47.50 a share. The stock would pay a constant annual dividend of \$3.80 a share. What is the company's cost of preferred stock, r_p ?

Q6. Percy Motors has a target capital structure of 40% debt and 60% common equity, with no preferred stock. The yield to maturity on the company's outstanding bonds is 9%, and its tax rate is 40%. Percy's CFO estimates that the company's WACC is 9.96%. What is Percy's cost of common equity?

Q7. Javits & Sons' common stock currently trades at \$30.00 a share. It is expected to pay an annual dividend of \$3.00 a share at the end of the year ($D_1 = \$3.00$), and the constant growth rate is 5% a year.

- (a) What is the company's cost of common equity if all of its equity comes from retained earnings?
- (b) If the company issued new stock, it would incur a 10% flotation cost. What would be the cost of equity from new stock?

Q8. The future earnings, dividends, and common stock price of Carpetto Technologies Inc. are expected to grow 7% per year. Carpetto's common stock currently sells for \$23.00 per share; its last dividend was \$2.00; and it will pay a \$2.14 dividend at the end of the current year. If the firm's beta is 1.6, the risk-free rate is 9%, and the average return on the market is 13%, what will be the firm's cost of common equity using the CAPM approach?

Q9. Patton Paints Corporation has a target capital structure of 40% debt and 60% common equity, with no preferred stock. Its before-tax cost of debt is 12%, and its marginal tax rate is 40%. The current stock price is $P_0 = \$22.50$. The last dividend was $D_0 = \$2.00$, and it is expected to grow at a 7% constant rate. What is its cost of common equity and its WACC?

Q10. Midwest Electric Company (MEC) uses only debt and common equity. It can borrow unlimited amounts at an interest rate of $r_d = 10\%$ as long as it finances at its target capital structure, which calls for 45% debt and 55% common equity. Its last dividend was \$2, its expected constant growth rate is 4%, and its common stock sells for \$20. MEC's tax rate is 40%.

Two projects are available:

- Project A has a rate of return of 13%.
- Project B's return is 10%.

These two projects are equally risky and about as risky as the firm's existing assets.

- (a) What is its cost of common equity?
- (b) What is the WACC?
- (c) Which projects should Midwest accept?

Dividend Policy

Situation-based questions

1. The contention that dividends have an impact on the share price has been characterized as the bird-in-the-hand argument.' Explain the essentials of this argument. Why this argument is considered fallacious?
2. Explain the effect of the following on the dividend policy: (i) transaction costs-external financing; (ii) agency costs.
3. What is the informational content of dividend payments? How does it affect the share value?

4. Explain the nature of the factors that influence the dividend policy of a firm.

5. The primary purpose for which a firm exists is the payment of dividends. Therefore, irrespective of the firm's needs and the desires of shareholders, a firm should follow a policy of very high dividend payout.' Do you agree? Why or why not?

6. What are the factors that influence management's decision to pay a dividend of a certain amount?

7. A company, **ElectroMax Ltd.**, has maintained a stable dividend of **₹8 per share** for the last 10 years. This year, profits unexpectedly fall by 35% due to supply-chain disruptions.

Management is considering either **cutting the dividend to ₹5** or ****** keeping it unchanged** to maintain investor confidence.

Questions:

What factors should management evaluate before deciding to cut or maintain the dividend?

How might a dividend cut affect the firm's stock price and investor perception?

Which dividend policy (stable, constant payout, residual) best fits this situation and why?

8. **TechNova Pvt. Ltd.** has doubled its profits this year. The board proposes increasing the annual dividend from **₹3 to ₹6** per share. However, the CFO warns that cash flows are volatile and the rise may not be sustainable.

Questions:

- What “signal” would such a dividend increase send to the market?
- What risks arise if the firm later fails to maintain this higher dividend?

- Should the company increase the dividend or maintain it? Justify using the **signaling theory**.

9. A company, Harmony Foods, shifts from a high-dividend policy to a low-dividend/retention-focused policy as it seeks expansion opportunities. How may this change alter the firm's investor base? Explain the clientele effect in this context. How might the stock price respond in the short run vs. long run?

10. A firm declares a 10% stock dividend instead of a cash dividend. The current market price is ₹400, and EPS is ₹40.

Questions:

- How will the number of shares outstanding change?
- How will the share price adjust after the stock dividend?
- Explain whether shareholder wealth changes.

11. During a recession, Metro Retailers reduces its annual dividend from ₹12 to ₹4 to preserve cash for survival.

Questions:

- Explain the potential negative signaling behind a dividend cut.
- Can a dividend cut ever be viewed positively? When?
- How will institutional investors likely react?

12. What is a stable dividend policy? Why should it be followed? What can be the consequences of changing a stable dividend policy?

13. How do shareholders react to dividend payout methods? (1) constant dividend per (2) constant dividend payout ratio; and (3) constant dividend per share plus extra dividend.

14. What are the effects of bonus issue and share split on the earnings per share and the market price of the share?

Numerical questions

1. Axel Telecommunications has a target capital structure that consists of 70% debt and 30% equity. The company anticipates that its capital budget for the upcoming year will be \$3,000,000. If Axel reports net income of \$2,000,000 and it follows a residual dividend payout policy, what will be its dividend payout ratio?
2. Gamma Medical's stock trades at \$90 a share. The company is contemplating a 3-for-2 stock split. Assuming that the stock split will have no effect on the market value of its equity, what will be the company's stock price following the stock split?

3. Delta Robotics Inc. currently has its stock trading at \$120 per share. The firm is considering implementing a 5-for-4 stock split to improve liquidity and make the stock more affordable for small investors. Assume the stock split does not change the total market value of the company's equity.

4. Beta Industries has a net income of \$2,000,000, and it has 1,000,000 shares of common stock outstanding. The company's stock currently trades at \$32 a share. Beta is considering a plan in which it will use available cash to repurchase 20% of its shares in the open market. The repurchase is expected not to affect net income or the company's P/E ratio. What will be Beta's stock price following the stock repurchase?

5. Orion Technologies has a net income of \$3,600,000 and 1,200,000 shares of common stock outstanding. The company's stock currently trades at \$45 per share. The firm plans to use excess cash to repurchase 25% of its outstanding shares in the open market. The repurchase will not affect net income or the firm's P/E ratio.

What will be Orion Technologies' stock price after the repurchase?

6. After a 5-for-1 stock split, Strasburg Company paid a dividend of \$0.75 per new share, which represents a 9% increase over last year's pre-split dividend. What was last year's dividend per share?

7.

RESIDUAL DIVIDEND MODEL Welch Company is considering three independent projects, each of which requires a \$5 million investment. The estimated internal rate of return (IRR) and cost of capital for these projects are presented here:

Project H (high risk):	Cost of capital = 16%	IRR = 20%
Project M (medium risk):	Cost of capital = 12%	IRR = 10%
Project L (low risk):	Cost of capital = 8%	IRR = 9%

Note that the projects' costs of capital vary because the projects have different levels of risk. The company's optimal capital structure calls for 50% debt and 50% common equity. Welch expects to have net income of \$7,287,500. If Welch establishes its dividends from the residual model, what will be its payout ratio?

8. Vega Manufacturing Ltd. has a target capital structure of 60% debt and 40% equity. For the upcoming year, the firm has identified profitable investment opportunities requiring a capital budget of \$5,000,000. The company expects net income of \$3,500,000 and follows a strict residual dividend policy. Assume the company has no access to new equity financing and finances the equity portion of its capital budget entirely from retained earnings. How much of the capital budget must be financed with equity? How much of the net income will be paid out as dividends?

9. Nova Energy Corp. follows a residual dividend policy and maintains a target capital structure of 50% debt and 50% equity. For next year, the company has planned a capital investment program of \$8,000,000. The firm expects the following:

Net income: \$4,500,000

It wants to maintain a minimum cash balance of \$300,000 and will not use this cash for capital spending.

The company will not issue new equity.

Question:

How much equity financing is required for next year's capital projects?

How much of the net income will be retained?

How much will be paid out as dividends?

What will be Nova Energy's dividend payout ratio?

10. Evergreen Smart Appliances Ltd. has recently secured a 4-month backlog of orders for its new energy-efficient air-purification system. To meet this rising demand, the company plans to boost production capacity by 50% through a \$18 million investment in new automated equipment and factory upgrades. The firm intends to preserve its target capital structure, which calls for 35% debt and 65% equity financing. Additionally, Evergreen has a long-standing dividend policy of paying out 40% of the previous year's net income to its shareholders. Last year, the company reported a net income of \$7.5 million. Assume Evergreen finances itself only with debt and common equity. How much external equity will Evergreen Smart Appliances need to raise at the beginning of the coming year in order to complete the planned expansion?

Financing Decisions – Practice Questions

Question 1

Discuss the dividend-price approach, and earnings-price approach to estimate cost of equity capital.

Question 2

The following is the capital structure of Simons Company Ltd. as on 31.12.1998:

Equity shares: 10,000 shares (Rs. 100 each)	Rs. 10,00,000
10% Preference Shares	Rs. 4,00,000
12% Debentures	Rs. 6,00,000

Market price per share = Rs. 110; Expected dividend = Rs. 10; Growth = 6%.

(i) Compute WACC (50% tax rate). (ii) After borrowing Rs. 10 lakhs @14%, dividend increases to Rs. 12 and share price falls to Rs. 105. Compute revised WACC.

Question 3

XYZ Ltd. book value capital structure:

Equity Capital (Rs. 10 shares)	Rs. 15 crores
11% Preference Capital	Rs. 1 crore
Retained Earnings	Rs. 20 crores
13.5% Debentures	Rs. 10 crores
15% Term Loans	Rs. 12.5 crores

Expected dividend = Rs. 3.60; growth = 7%; market price = Rs. 40. Preference shares sell @ Rs. 75; Debentures @ Rs. 80. Tax rate = 40%.

(i) Compute WACC (book value and market value weights). (ii) Prepare WMCC schedule given additional Rs. 10 crores financing.

Question 4

JKL Ltd. has the following book-value capital structure (details as per file). Compute WACC based on given information and recompute after raising additional Rs. 20 lakhs debt.

Question 5

Source	Book Value	Market Value
Equity shares @ Rs.100	80,00,000	1,60,00,000
9% Preference Shares	20,00,000	24,00,000
11% Debentures	60,00,000	66,00,000
Retained Earnings	40,00,000	—

Equity share price = Rs. 200; last dividend = 25%; growth = 5%. Corporate tax = 30%; shareholder tax = 20%.

(i) Cost of each source (ii) WACC (book value) (iii) WACC (market value)

Question 6

Calculate EBIT at which EPS indifference point occurs:

- (i) Equity Rs. 6,00,000 + 12% Debentures Rs. 4,00,000 (ii) Equity Rs. 4,00,000 + 14% Preference Rs. 2,00,000 + 12% Debentures Rs. 4,00,000
Tax = 35%; Par value = Rs. 10.

Question 7

D Ltd. growth: 12% (Years 1–2), 10% (Years 3–4), 8% thereafter. Last dividend = Rs. 1.50;
Required return = 16%.

PV factors @16%: 0.862, 0.743, 0.641, 0.552.

Compute current share value.

Question 8

Company needs Rs. 31,25,000 for new plant. Three plans (equity only, equity + debentures, equity + preference). EBIT values given; tax = 40%.

(i) Compute EPS under each plan (ii) Recommend the best plan (iii) Compute indifference points

Question 9

A new project in Zip Ltd. requires Rs. 4.50 crore. Interest = 12%; Corporate Tax = 50%.
Required debt-equity ratio = 2:1.

Compute the point of indifference.

Question 10

Discuss the impact of financial leverage on shareholders' wealth using ROA and ROE framework.

Question 11

EBIT	Rs. 1,120 lakhs
PBT	Rs. 320 lakhs
Fixed Costs	Rs. 700 lakhs

Calculate the percentage increase in EPS if sales increase by 5%.

Question 12

The capital structure of **ABC Ltd.** consists of:

- Equity share capital = Rs. 5,00,000 (Rs. 100 per share) - 10% Debentures = Rs. 5,00,000

Sales increase from 50,000 to 60,000 units Selling price = Rs. 12 Variable cost = Rs. 8 Fixed cost = Rs. 1,00,000 Tax = 50%

Required: (a) Percentage increase in EPS (b) DFL at 50,000 and 60,000 units (c) DOL at 50,000 and 60,000 units (d) Comment on behaviour of EPS, DFL, DOL as sales rise

Question 13

A firm has sales Rs. 75,00,000, variable cost Rs. 42,00,000, fixed cost Rs. 6,00,000, Debt Rs. 45,00,000 @ 9%, Equity Rs. 55,00,000.

Required: (i) ROI (ii) Whether financial leverage is favourable (iii) Operating, financial and combined leverage (iv) New EBIT if sales drop to Rs. 50,00,000

Question 14

Prepare Income Statement of Company A, B and C using:

	A	B	C
Financial Leverage	3:1	4:1	2:1
Interest	200	300	1000
Operating Leverage	4:1	5:1	3:1
Variable cost %	66 2/3%	75%	50%
Tax Rate	45%	45%	45%

Question 15

Calculate DOL, DFL and DCL for:

	P	Q	R
Output	3,00,000	75,000	5,00,000
Fixed Costs	3,50,000	7,00,000	5,00,000
Variable Cost/unit	1.00	7.50	0.10
Interest	25,000	40,000	—
Selling Price	3.00	25.00	0.50

Corporate Finance Practice Questions

Finance and Accounting Area

Jaipuria Institute of Management, Noida

(Practice Question Bank for Students)

Practice Set

Leverage Analysis, EBIT–EPS Analysis, Capital Structure Decisions

Question 1

Sterling Fabrics Private Limited reports the following information:

Liabilities:

- Equity Share Capital (Rs. 10 each): Rs. 9,50,000
- 11% Term Loan: Rs. 5,50,000
- Reserves and Surplus: Rs. 1,80,000

Operating data:

- Units sold: 2,80,000
- Selling price/unit: Rs. 6.75
- Variable cost/unit: Rs. 4.10
- Fixed operating costs: Rs. 2,10,000

Corporate tax rate: 34%.

Projected changes:

- Sales volume $\uparrow$ 12%
- Variable cost $\downarrow$ 2%

Required:

- (a) Compute Degree of Financial Leverage (current and projected).
- (b) Compute Degree of Combined Leverage (current and projected).
- (c) If sales increase by 18%, compute % change in EPS.

Question 2

Bharat Auto Parts Ltd. requires Rs. 4,50,000 for expansion.

Plan A:

- 13% Term Loan: Rs. 2,50,000
- 3,000 new equity shares @ Rs. 100

Plan B:

- 4,500 new equity shares @ Rs. 100

Additional:

- Tax rate: 48%
- EBIT scenarios: Rs. 85,000 and Rs. 1,10,000
- Existing equity: 7,500 shares

Required:

- (a) Recommend a plan at each EBIT level.
- (b) Compute the Indifference EBIT level.

Question 3

Harvest AgroFoods — Balance Sheet extract:

Liabilities:

- Equity Share Capital: Rs. 72,000
- Retained Earnings: Rs. 24,000
- 9% Long-term Debt: Rs. 88,000
- Current Liabilities: Rs. 36,000

Assets:

- Fixed Assets: Rs. 1,40,000
- Current Assets: Rs. 62,000

Additional:

- Total Assets Turnover: 2.5
- Fixed Costs: Rs. 1,20,000
- Variable cost ratio: 45%
- Tax rate: 38%

Required: Compute DOL, DFL, DCL.

Question 4

Nova Textiles Corporation — current summary:

Income Statement

- EBIT: 2,80,000
- Interest: 50,000
- PBT: 2,30,000
- Tax @32%: 73,600
- PAT: 1,56,400

Other:

- Equity shares: 52,000
- EPS: Rs. 3.01
- Market price: Rs. 36
- P/E: 12

Expansion fund needed: Rs. 2,40,000 Options: (1) Raise via debt @10% (2) Raise via new equity at market price

Required: Analyse which option gives higher EPS and higher MPS.

Question 5

Orion Electronics:

- Sales: 11,50,000
- Variable costs: 7,20,000
- Fixed costs: 1,80,000
- Long-term debt: 4,20,000 @ 9%

Required:

- (a) Compute DOL, DFL, DCL.
- (b) If company wants to double EBIT, compute % increase in sales required.

Question 6

Atlas Manufacturing Ltd.:

Income Statement

- Sales: 6,200,000
- Variable expenses: 2,400,000
- Contribution: 3,800,000
- Fixed cost: 1,300,000
- EBIT: 2,500,000
- Interest: 1,200,000
- EBT: 1,300,000

Required:

- (a) % change in EBIT if sales $\uparrow$ 12%.
- (b) % change in EPS if EBIT $\uparrow$ 18%.
- (c) % change in EPS if sales $\uparrow$ 10%.

Question 7

Mehra Manufacturing Ltd.:

- Equity capital: Rs. 6,00,000 (Rs. 100 each)
- Fund requirement: Rs. 3,50,000
- EBIT: Rs. 1,80,000
- Tax rate: 45%

Capital structure plans A–D (equity, debt, preference mixes).

Required:

- (a) Rank plans based on EBIT–EPS at given EBIT.
- (b) Comment on sensitivity if EBIT rises or falls.

Question 8

Pacific Motors Corporation:

Structure A

- Debt: \$550,000 @7.5%
- Equity: \$1,050,000

Structure B

- Debt: \$1,100,000 @9%
- Equity: \$500,000

EBIT: \$320,000 Tax: 26%

Required:

- (a) Compute EPS for both.
- (b) Recommend structure based on EPS and risk.

Question 9

Sagar Pharmaceuticals — raising Rs. 3,00,000:

Plan A: Borrow Rs. 1,80,000 @9% + issue 1,200 shares.

Plan B: Issue 3,000 shares.

Other:

- Existing shares: 4,000
- Tax rate: 40%

Required:

- (a) Compute EPS if EBIT = Rs. 1,60,000.
- (b) Compute Indifference EBIT.
- (c) Recommend plan above and below indifference.

Question 10

Meridian Textiles:

Liabilities

- Share Capital: Rs. 1,40,000
- Long-term Borrowings (10%): Rs. 1,20,000

Additional:

- Sales/Assets = 1.8
- Fixed cost: Rs. 80,000
- Variable cost ratio: 48%
- Tax: 36%

Required:

- (a) Compute Sales.
- (b) Prepare full income statement.
- (c) Compute DOL, DFL, DCL.

Time Value of Money – Question Bank

Q1. You have \$2,500 to invest. You can invest in a start-up that is projected to return 22% per year, or you can invest in a diversified portfolio that is projected to return 9% per year. What is the value turned down (i.e., opportunity cost) if you choose the lower-risk, lower-return diversified portfolio and the projection holds for 10 years?

Q2. Patrick Seeley's savings account doubled in value over the past four years. What annual rate of return did he earn?

Q3. You have \$12,000 in cash and need to decide how to invest it. You can invest it in a mutual fund that will generate a 5% return per year, or you can lend the money to your brother who says he will pay you back \$1,200 per year for 10 years. Which option is financially the best and by how much?

Q4. When you were born, your parents established a savings account for you with an annual deposit each birthday of equal size. The account earned interest at 4% per year compounded annually during your first eight years but only pays 2.5% per year compounded annually after that. You are now 21 years old and the account contains \$15,624.78. How large were the annual birthday deposits?

Q5. Cincinnati Bengals' quarterback Joe Burrow is trying to decide between three contract options. Which should he choose?

- **Option A:** 5 annual payments of \$10M beginning today ($t=0$).
- **Option B:** 5 annual payments of \$12M beginning at the end of the year ($t=1$).
- **Option C:** Lump sum payment of \$45M today ($t=0$).

Assume a discount rate of 8%.

Q6. Surmec, Inc. has set a goal to achieve annual net income of \$2,500,000. Current sales are \$30,000,000 and net income is \$1,200,000. If net income and sales grow at the same rate, at what annual rate must sales grow to hit the target in 6 years?

Q7. You will be graduating in two years and want to have a down payment saved for a house. You plan to deposit equal amounts at the end of each month for the next 30 months into an account that earns 6% APR compounded monthly. Your goal is to accumulate \$25,000. How much must you deposit each month?

Q8. Both Amy and Lauren want to retire at age 65 with \$2,000,000.

Amy starts saving at age 25, depositing \$500 per month at 7% APR compounded monthly.

Lauren starts at age 40, depositing \$1,200 per month at the same rate.

Who reaches \$2M first? How much does the other accumulate by age 65?

Q9. You want to buy a house three years from today. You decide to save by depositing an amount that grows by 4% per year into an account paying 6% per year compounded annually. If the first deposit (made at the end of this year) is \$10,000, how much will you have saved by the time you are ready to buy?

Q10. You have been offered an opportunity to invest in a project that has the following projected cash flows:

<i>Year</i>	<i>CashFlow(\$)</i>
0	−100,000
1	40,000
2	30,000
3	50,000
4	60,000

Discount rates: 10% for year 1, 11% for year 2, 12% for years 3 and 4.
Compute the NPV.

practice

Q11. Tirade Owens is considering three contract alternatives:

- **A:** \$1,000,000 now and \$250,000 per year for 10 years.
- **B:** \$500,000 now and \$325,000 per year for 10 years.
- **C:** \$1,850,000 now only.

Assume a discount rate of 9%. Which option has the highest present value?

Q12. Gary Kornig is 30 years old and wants to retire at age 65. He plans to save \$600 per month until retirement into an account that earns 8% APR compounded monthly. How much money will he have at retirement?

Q13. You win the state lottery. You are offered a choice between a lump-sum of \$100,000,000 today or an annuity of \$6 million per year for 25 years. If the discount rate is 4.5%, which option should you take?

Q14. At what interest rate would you be indifferent between the two options in Q13?

Q15. Babu Baradwaj wants to fund his daughter's college education. She will start college 10 years from now and will need \$25,000 per year for 4 years. If the discount rate is 5%, how much does he need to set aside today to fully fund the education?

Q16. You are now 50 years old and plan to retire at age 67. Your current retirement account contains \$350,000 and earns 6% per year. You plan to deposit an additional \$10,000 per year at the end of each year until retirement. How much will you have at age 67?

Q17. Trevor Diaz wants to finance a Maserati for \$95,000 at 4.5% APR for 72 months. Compute the monthly payment and construct the first three lines of the amortization schedule.

Q18. The Yan family buys a home for \$600,000 and finances \$480,000 at 6% APR for 30 years. Compute the monthly payment. Then compute: (a) Total interest paid over 30 years. (b) Balance after 10 years. (c) Amount of principal repaid in the 120th payment.

Q19. Assume you will start working as soon as you graduate and continue until age 65. You want to accumulate \$3,500,000 by retirement. If the investment account earns 7% per year and you save at the end of each year, how much must you save annually?

Working Capital Management – Practice Questions

Q1. Blue Ice company wants to investigate their operating and cash conversion cycles for the year 2025.

Inventory: 2,890 Accounts Receivables: 2,800 Accounts Payables: 2,670 Net sales: 24,589
Cost of Goods Sold: 19,630

Q2. Daisy Corporation intends to understand how many days it takes to turn its inventory into sales.

Operating Cycle: 83 days Accounts Receivables: 4,30,000 INR Net Sales: 29,20,000 INR

Q3. HDFC offered a Home Loan to a person migrated from Chandigarh to Delhi. The total loan amount was 5,50,000 INR with an annual interest rate of 9.5 percent. The minimum balance of 15 percent of the loan was retained by the HDFC Bank. Calculate the Effective Rate of interest charged by the Bank to the customer.

Q4. Cash conversion cycle: The interviewer asks you to compute your company's cash conversion cycle.

Average Inventory = INR 26,300 Accounts Receivable = INR 17,900 Accounts Payable = INR 15,100 Sales = INR 154,000 Cost of Goods Sold = INR 122,000

Calculate and interpret your firm's cash conversion cycle.

Q5. Aviva Technology's operating cycle is 81 days. Its inventory was INR 134,000 at the end of last year, and COGS = INR 1.1 million. How long does it take Aviva to collect its receivables on average?

Q6. Premier Corp. has net sales of INR 812,344, and cost of goods sold = 70. If the firm's accounts receivable total INR 113,902 and its operating cycle is 81.6 days, how much inventory does the firm have?

Q7. Sliver Computing, Inc. reported the following:

Cash and marketable securities: INR 94,032 Accounts receivable: INR 160,684 Inventories: INR 19,809 Other current assets: INR 647 Total current assets: INR 275,172

Accounts payable: INR 68,561 Notes payable: INR 136,320 Total current liabilities: INR 204,881

Cost of goods sold: INR 291,240 Cash conversion cycle (given): 21.53 days

Calculate the firm's days' sales outstanding.

Q8. Ginseng Company collects 503177Accounts receivable = INR 1,213,000.
Prepare an aging schedule.

Q9. What impact would the following actions have on the operating and cash conversion cycles?

(a) More raw material than usual is purchased. (b) Finished goods inventory builds up (off-season). (c) Better payment terms are negotiated with suppliers. (d) Cash discounts offered to customers are decreased. (e) Improvement in manufacturing technique decreases COGS.

Q10. Morgan Sports Equipment Company:

Cash: INR 6,77,423 Accounts Receivable: INR 18,45,113 Inventories: INR 13,12,478 Total Current Assets: INR 38,35,014

Accounts Payable: INR 17,21,669 Notes Payable: INR 21,13,345 Total Current Liabilities: INR 38,35,014

Net Sales: INR 99,12,332 COGS: INR 59,47,399

Required: (a) Days' sales outstanding (b) Days' sales in inventory (c) Days' payables outstanding (d) Operating cycle (compare with industry = 72 days) (e) Cash conversion cycle (compare with industry = 42 days)

Q11. Define Net Working Capital. Discuss the importance of working capital management. How net working capital is calculated?

Q12. Describe three current assets financing strategies and discuss the main sources of short term financing?

Q13. Explain how operating and cash conversion cycles are evaluated?

Q14. Describe strategies for financing working capital. How to match maturities and role of permanent working capital.

Q15. Distinguish between long term financing and short term financing.

Case Based Question

LG Electronics Ltd. is a medium-sized company engaged in the manufacturing of household appliances such as washing machines and air conditioners. The company has been facing increasing competition and is looking to improve its efficiency by managing its working capital more effectively.

The following information pertains to the financial year 2024–25:

Particulars	Amount (₹) / Days
Average Inventory	40,00,000
Annual Cost of Goods Sold (COGS)	2,40,00,000
Average Accounts Receivable	30,00,000
Annual Credit Sales	3,00,00,000
Average Accounts Payable	20,00,000
Annual Credit Purchases	1,80,00,000
Cash Balance	10,00,000
Operating Expenses per annum	60,00,000

Required:

1. Calculate the Inventory Conversion Period (ICP) for LG Electronics Ltd.
2. Compute the Receivables Collection Period (RCP) and the Payables Deferral Period (PDP) for the company.
3. Determine the Operating Cycle (OC) and Cash Conversion Cycle (CCC) for LG Electronics Ltd.
4. Based on your calculations, analyze whether the company's working capital cycle is efficient. Suggest two managerial actions to shorten the cycle.
5. If the company decides to reduce its inventory holding period by 10 days and improve receivables collection by 5 days, estimate the new Cash Conversion Cycle and discuss how this change could impact liquidity and profitability.

Practice