

Annexure – 76-84

College of Vocational Studies

Insurance Management**Semester VII**

DSC-1	Practice of General Insurance
DSE-1	Business Research Methodology in Insurance Management
DSE-1	Behavioral insurance
DSE-2	Hands-on Python
DSE-2	Economics of Health
GE Common Pool <u>for BA (VS) Insurance Management</u>	
1	Offered by History Department
2	Offered by Political Science Department
3	Offered by Mathematics Department
4	Offered by Economics Department
5	Service marketing for Tourism and Hospitality (Offered by Department of Tourism, CVS)

Semester, VII

DISCIPLINE SPECIFIC CORE COURSE (DSC- 7.1)

Practice of General Insurance

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Total Credits	Lectures	Tutorial	Practical	Eligibility	Prerequisite of the course
Practice of General Insurance	4	3	1	0	AS per University Norms	None

Learning Objectives

The learning objectives of this course are to acquaint students with the knowledge of principles and structure of liability insurance. This course will provide understanding about various classes of engineering insurance and their relevance in industrial contexts and underwriting and legislative framework of engineering insurance. It will provide an insight into reinsurance management and reinsurance regulations in India and their practical applications. Also this course will provide understanding of general insurance accounts preparation and regulation of investment.

Learning Outcomes

After successful completing this course, the learners would be able to:

- Describe the scope and significance of liability insurance in various business contexts.
- Identify and explain key policy documents, forms, and legal concepts involved in liability underwriting.
- Analyse overseas practices and emerging trends in global liability insurance.
- Assess the risk characteristics of different types of plant, machinery, and construction activities.
- Evaluate various engineering insurance products such as Contractors All Risks (CAR), Boiler & Pressure Plant, and Electronic Equipment Insurance.
- Design reinsurance programs based on strategic retentions and risk-sharing models.
- Explore alternative risk transfer mechanisms and evaluate their relevance in modern risk management.
- Prepare and interpret financial statements specific to life and non-life insurance companies.

- analyse the impact of statutory requirements on insurance financial reporting.

Unit 1. **Liability Insurance** (10 Hours)

Introduction to liability insurance. Policy documents and forms. Legal background. Liability underwriting. Statutory liability. General public liability (industrial/non-industrial risks). Products liability insurance. Professional indemnity insurance. Commercial general liability. Directors and officers liability. Other policies & overseas practices. Liability insurance claims.

Unit 2. **Engineering Insurance** (11Hours)

The engineering insurance business, classes of business, principles and practices. Development of engineering insurance and relevant legislation. Types of plant/machinery and equipment and associated hazards. Construction phase insurances. The project stages, works contract & other contracts. Contractors all risks insurance. Machinery insurance. Boiler & pressure plant insurance. Machinery loss of profits insurance. Electronic equipment insurance.

Unit 3. **Reinsurance Management.** (12 Hours)

Forms of reinsurance. Methods of reinsurance. Retentions. Reinsurance program-design. Reinsurance - distributing the programme arrangements. Reinsurance accounting. Reinsurance markets. Reinsurance financial security. Alternatives to traditional reinsurance. Inward reinsurance business. Processing information for reinsurance decisions. Law and clauses relating to reinsurance contracts. Reinsurance regulations in India.

Unit 4. **General insurance accounts preparation and regulation of investment** (12Hours)

Financial accounting –meaning and scope. Accounting concepts, principles and convention. Accounting standards –As and Ind As- objectives and interpretation. Accounting policies. Accounting process, methods & control and finalisation of accounts. Bank reconciliation statement, introduction to company accounts (based on the companies act 2013). Non-life insurance business accounting methods, techniques & process. General insurance accounting process & techniques. Insurance accounting regulations. Preparation & presentation of financial statements. Reinsurance accounting.

Suggested Readings:

Barnett, S. (2022). *Life insurance accounting*. Legare Street Press.
<https://doi.org/10.1015667525>

Clarke, M. A. (2017). *The law of liability insurance*. Informa law from Routledge.

Rejda, G. E. (2005). *Principles of risk management and insurance*. Pearson Education India.

Ende, H., Anderson, E. R., & Crego, S. (2005). Liability insurance: a primer for college and university counsel. *JC & UL*, 23, 609.

William, O. D. (2021). *Reinsurance and the law of aggregation: Event, occurrence, cause* (p. 236). Taylor & Francis.

Semester VII

DISCIPLINE SPECIFIC Elective DSE-I 7.1

Business Research Methodology in Insurance Management

Offered by Commerce Department, College of Vocational Studies

Course Title & Code	Total Credits	Lectures	Tutorial	Practical	Eligibility	Prerequisite of the course
Business Research Methodology in Insurance Management	4	3	1	-	As per University norms	None

Learning Objectives:

- Understanding Research Methodology – Learn the fundamentals of research methods and their application in the insurance industry.
- Data Collection & Analysis – Explore techniques for gathering and analyzing data relevant to insurance markets and policies.
- Risk Assessment & Decision Making – Develop skills to evaluate risks and make informed business decisions using research-based insights.
- Quantitative & Qualitative Research – Understand different research approaches and their relevance in insurance studies.
- Market Trends & Consumer Behavior – Analyze insurance market trends and customer preferences through research.
- Application of Statistical Tools – Utilize statistical methods to interpret insurance-

Learning Outcomes:

After successful completion of the course, the students will be able to

- Understand the Role of Research in Insurance Management and its relevance to underwriting, risk assessment, claims, customer satisfaction, and product development in insurance.
- Recognize and articulate key research problems in the insurance sector (e.g., low policy renewal rates, claims fraud, product gaps).
- Formulate clear research questions and hypotheses specific to insurance challenges.
- Select suitable research designs (exploratory, descriptive, or causal) for different insurance management problems.

- Distinguish between qualitative and quantitative research techniques in insurance.
- Understand methods of data collection tailored to the insurance industry, ensuring accuracy and ethical standards.

Course outline

UNIT I: Introduction to Business Research in Insurance (10 Hours)

- Importance: Reduces risk, improves underwriting decisions, predicts claims, enhances customer service, supports product innovation.
- Problem Identification
(e.g., "Why is policy renewal rate declining among millennials?")
- Formulating Research Objectives
- Designing Research Plan
- Data Collection
- Data Analysis and Interpretation
- Exploratory Research: Understanding emerging risks (e.g., cyber risk insurance).
- Descriptive Research: Customer demographics, insurance penetration studies.
- Causal Research: Impact of premium changes on customer renewal rates.

UNIT II: Data Sources and Sampling in Insurance Research (11 Hours)

- Primary Data:
 - Customer surveys (on satisfaction, service quality)
 - Agent and broker interviews
 - Claims investigations
- Secondary Data:
 - Industry reports (IRDAI, NAIC reports)
 - Company records (policies sold, claims data)
 - Public data (mortality tables, accident statistics)
- Sampling Techniques
- Probability Sampling: Random sampling of policyholders.
- Stratified Sampling: Stratifying by policy type (life, health, motor).
- Convenience Sampling: Customer interviews at branch offices.

Unit III :Measurement and Scaling in Insurance & Qualitative Research Methods (12Hours)

- Measurement Tools:
- Likert Scales for service satisfaction
- Ranking methods for importance of insurance product features
- Common Metrics:
- Claims frequency
- Claims severity
- Customer Satisfaction Index
- Net Promoter Score
- Focus Groups: To understand customer perceptions about new insurance products.

- In-depth Interviews: Brokers/agents about market trends.
- Surveys: Customer preference for digital vs traditional claims processes.
- \Predictive analytics for underwriting
- Descriptive Statistics: Mean, median, variance for claims data.
- Regression Analysis: Predicting claims amount based on policyholder data.
- Cluster Analysis: Segmenting customers for targeted marketing.
- Survival Analysis: Modeling policy lapse rates.

UNIT IV : Applications of Research in Insurance Management(12 Hours)

- Product Development: Researching demand for new policies (e.g., microinsurance, pet insurance).
- Risk Management: Researching emerging risks and their insurability.
- Customer Relationship Management: Understanding service gaps to improve customer loyalty.
- Marketing Strategy: Target market identification and media planning.
- Claims Management: Studying patterns in fraudulent claims.

Recommended Textbooks for Reference:

- "Business Research Methods" by Donald R. Cooper and Pamela S. Schindler
- "Research Methodology: Methods and Techniques" by C.R. Kothari
- "Principles of Risk Management and Insurance" by George E. Rejda (for insurance context)
- "Insurance Operations and Regulation" by Julie A. S. Miller (for insurance industry data usage)

Semester VII

DISCIPLINE SPECIFIC ELECTIVE COURSE -DSE-I 7.2

Behavioral Insurance

Offered by Commerce Department, College of Vocational Studies

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Total Credits	Lectures	Tutorial	Practical	Eligibility	Prerequisite of the course
Behavioral Insurance	4	3	1	0	As per University Norms	None

Learning objectives:

The course aims to equip students with the knowledge and skills necessary to behavioral insurance and how it contrasts with traditional models, behavioral economics concepts and behavioral economic frameworks (e.g., behavioral lifecycle theory) to understand consumer decision-making under uncertainty and risk. The course aims to provide students with a comprehensive **Consumer Behavior in Insurance and Behavioral Finance Applications in Insurance**. Students will gain knowledge of key **Technology, Data, Ethics, and the Future**.

Learning outcomes

Upon completion of this course:

- Understand the foundations of behavioral insurance and how it differs from traditional insurance models.
- Analyse how behavioral economics and consumer psychology influence insurance behavior.
- Explore decision-making biases, heuristics, and emotional responses that affect insurance buying and claims behavior.
- Apply concepts from behavioral finance to insurance-related choices.
- Evaluate the ethical, regulatory, and technological aspects of behavior-based insurance.

Unit I: Foundations of Behavioural Insurance (10 hours)

Introduction to behavioral insurance: evolution and emergence of behavior-based models, traditional vs. Behavior-based underwriting and pricing, foundations from behavioral economics: heuristics and biases: representativeness, availability, anchoring, loss aversion and framing effects in risk decisions,

bounded rationality in insurance choices, prospect theory and its relevance to insurance products, role of psychology in insurance contexts: cognitive psychology and behavioral tendencies, emotion and affect in risk perception, perceived control and optimism bias in insurance planning, frameworks and models: dual-process theory: system 1 vs. System 2 thinking, behavioral lifecycle theory, decision-making under uncertainty vs. Risk

Unit II: Consumer Behaviour in Insurance(11hours)

Insurance decision-making: role of perceived risk and subjective probability, trust and credibility in insurance brands, complexity aversion and information overload, behavioral influences on purchase behavior: framing and presentation of policy options, default options, inertia, and status quo bias, peer effects and social norms in policy adoption, post-purchase behavior & claims psychology: moral hazard and behavioral loyalty, regret aversion and satisfaction post-claim, complaint behavior and perceived fairness, communication & agent behavior: behavioral nudges in agent-customer interaction, visual framing, simplification, and behavioral scripting, role of storytelling and narratives in influencing risk perception.

Unit III: Behavioral Finance Applications in Insurance(12 hours)

Introduction to behavioral finance concepts: time inconsistency and intertemporal choice, present bias and its implications for long-term insurance, hyperbolic discounting and savings-linked insurance, biases impacting financial and insurance behavior, overconfidence, self-attribution bias, and insurance over-/under-purchasing, mental accounting: earmarking insurance for certain risks, ambiguity aversion vs. Risk aversion, prospect theory in premium and payout design: reference points in perceived value of premiums, diminishing sensitivity to large vs. Small claims, utility curvature and behavioral demand elasticity, behavioral approaches to insurance product structuring: designing around biases: deductible framing, bundling, and coverage options, perceived fairness of pricing: community vs. personalized premiums, Case examples from microinsurance and inclusive insurance models.

Unit IV: Technology, Data, Ethics, and the Future(12hours)

Behavioral data & digital insurance models, data sources: telematics, wearables, mobile apps, and smart home devices, gamification, nudges, and reward structures, dynamic pricing based on behavior, case studies of behavior-based insurance: vitality (discovery, john hancock), root insurance, lemonade, metromile, success metrics and user engagement strategies, failures and limitations of behavioral models, ethical, legal, and regulatory considerations; data privacy, consent, and GDPR implications, algorithmic fairness and transparency, surveillance vs. Empowerment debate, future trends, predictive behavioral models using ai and machine learning, integration of behavioral insurance in public policy and welfare schemes, social scoring and ethical dilemmas.

Suggested Reading:

Thaler, R. H. (2015). *Misbehaving: The making of behavioral economics*. W. W. Norton & Company.

Kahneman, D. (2011). *Thinking, fast and slow*. Farrar, Straus and Giroux.

Ackert, L. F., & Deaves, R. (2010). *Behavioral finance: Psychology, decision-making, and markets* (2nd ed.). South-Western Cengage Learning.

Thaler, R. H., & Sunstein, C. R. (2009). *Nudge: Improving decisions about health, wealth, and happiness* (Rev. ed.). Penguin Books.

Semester-VII

Discipline Specific Elective- DSE -II 7.3

Hands-on Python

Offered by Department of Economics

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
VII	Hands-on Python	4	1	0	3	Class 12th Pass	NIL

Course Objectives:

The objective of this course is to equip students with the fundamental knowledge and practical skills in Python programming. It will enable the students in understanding usefulness of Python as an analytical tool in diverse fields. They will learn how to use lists, tuples, dictionaries, and functions programs. They will be prepared to use the program for managing data frames, visualising datasets and performing simple statistical calculations.

Course learning outcomes:

After completion of the course students will be able to:

1. Describe the concepts of constants, variables, data frames and operators.
2. Write programs using list, tuple, set and strings handling functions.
3. Write programs using user-defined functions and python dictionary.
4. Create data frames and transform and aggregate them through slicing, merging and visualising.
5. Visualise and present data sets with the help various types of charts and graphs.
6. Calculate measures of central tendency and measures of dispersion.

Unit 1: Introduction to Python Programming [4 Theory Hours + 10 Practical Hours]

Introduction to Python and its features, Setting up the Python Development Environment, Basic Python syntax and data types, Variables, operators, and expressions in Python, Python List, Tuples, Python Dictionaries, Functions and Packages, NumPy

Unit 2: Data Manipulation with Pandas [3 Theory Hours + 30 Practical Hours]

Transforming DataFrame, Aggregating DataFrame, Slicing and Indexing DataFrame, Creating and Visualizing DataFrame, Data Merging Basics, Merging Tables With Different Join Types, Advanced Merging and Concatenating

Unit 3: Data Visualization and Analysis [3 Theory Hours + 30 Practical Hours]

Introduction to data visualization libraries (Matplotlib, Seaborn), Plotting and customizing charts and graphs, Exploratory data analysis using Python, Presenting insights and findings with visualizations, Creating interactive and appealing data visualizations

Unit 4: Statistics with Python [5 Theory Hours + 20 Practical Hours]

Data Classification (Discrete, Continuous, Categorical), Mean, Median, Mode, Variance, Standard Deviation, Quartile, Percentile, Inter-quartile Range, Identifying outliers, correlation

Suggested Readings:

- VanderPlas, J. (2016). Python Data Science Handbook: Essential Tools for Working with Data. O'Reilly Media.
- Downey, A. B. (2014). Think Stats: Exploratory Data Analysis in Python (2nd ed.). O'Reilly Media.

Notes:

- 1. Suggested readings shall be updated and uploaded on the college website from time to time.**
- 2. Examination scheme and mode shall be prescribed by the Examination branch, University of Delhi from time to time.**

Semester-VII

Discipline Specific Elective-DSE-II 7.4

Economics of Health

Offered by Economics Department, College of Vocational Studies

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
VII	Economics of Health	4	3	1	0	Class 12th Pass	Nil

Learning Objectives:

The learning objectives of this paper are to understand and analyse the economic principle underlying healthcare systems. The paper also intends to apply economic concepts to healthcare decision making. Economics of Health and education will help to analyse healthcare financing models. This paper aims to apply economic concepts and methods to real world health care problems and policy issues.

Learning Outcomes:

The students will be able to:

- Analyse the economic aspects of health care system, including financing, delivery and regulation
- Recognise the role of economic evaluation in healthcare decision making, including cost benefit analysis, cost effectiveness analysis and cost utility analysis
- Critically evaluate the economic impact of health care policies and interventions.
- Apply economic concepts and methods to real world health care problems and policy issues.
- Develop skills in economic evaluation and decision making in healthcare.

Unit I: Overview, structure, concepts and terminologies of Health economics, Health as an economic good, Economics of health Vs Economics of health care. Arrow's perspective on health care. Demand in health care, Utility and Health, measuring price sensitivity and elasticities, Supply in health care

(10 hours)

Unit II: Financing and insurance in Healthcare, Equity and Health, Financing and insurance in health care, Financing health care, Uncertainty and Risk- Health insurance, Moral hazard, Adverse selection

(13 hours)

Unit III: Behavioural health economics: introduction, Expected utility theory, Prospect theory, Nudge theory

Theory and principles of economic evaluation: Introduction, cost benefit analysis, cost effectiveness and cost utility analysis

(14 hours)

Unit IV: Public health and policies, Socio economic disparities in Health, Indian Health system

(8 hours)

Practical Exercises:

The learners are required to:

1. Assess and manage risks associated with health insurance, including factors such as adverse selection, moral hazard
2. In the Health Insurance Game participants buy and sell insurance under several different scenarios of information availability (perfect information, asymmetric uncertainty or symmetric uncertainty) and policy restrictions
3. Micro and macro health data handling

Suggested Readings:

- Bhattacharya,J.,Hyde,T., &T, P. (2014). *Health Economics*. (4th ed.). Palgrave Macmillan.
- Morris,S.,Devlin,N.,Parkin,D., & Spencer, A(2012). *Economic Analysis in Healthcare* (2nd ed.). Wiley.
- Zweifer,P.,Breyer,F.& Kiffman,M. (2009). *Health Economics*. (2nd ed.). Springer
- Kohn,J.(2021) “The Health insurance game”, in Platt,M.&Goodman,A.C.(ed.) *Handbook on Teaching Health Economics*(2021), Edward elgar publishing.
- Joe,W.,Mishra,U.S.&Navaneetham,K(2008) *Economic and political weekly*, Aug2-8, Vol43, No.31
- Sodhi,C.&Rabbani,A.(2014) “Health Service system in India: Is insurance the way forward” in *Economic and Political Weekly*,August30,2014, Vol.49, No.35

Notes:

1. Suggested readings shall be updated and uploaded on the college website from time to time.
2. Examination scheme and mode shall be prescribed by the Examination branch, University of Delhi from time to time.

Semester VII
Generic Elective-GE -7.1
Service marketing for Tourism and Hospitality
Offered by Tourism Department, College of Vocational Studies
Credit Distribution, Eligibility and Pre-Requisite of the Course

Course Title and Code	Course Code	No. of credits	Components of the course			Eligibility Criteria	Pre-requisites of the course
			Lecture	Tutorial	Practical		
Service marketing for Tourism and Hospitality GE -7.1	GE 7.1	4	3	1	0	Pass in Class XII	NIL

Learning Objectives:

This course explores the unique nature of service marketing within the tourism and hospitality industries. Students will learn the core principles of services marketing, understand consumer behavior in service settings, and develop strategies for creating value, enhancing customer experience, and building long-term relationships in service-based businesses. The course blends theory with practical insights through case studies, discussions, and real-world examples.

Learning Outcomes:

After completing this course, the learners would be able to:

1. explain the distinctive characteristics of service marketing in tourism and hospitality.
2. apply the 7 Ps framework to design and manage effective service marketing strategies.
3. analyze service encounters and customer expectations in various hospitality contexts.

4. evaluate service quality using models like SERVQUAL and propose improvements.
5. use digital and relationship marketing tools to enhance customer engagement and retention.

Unit I

Introduction to Service Marketing

(11Hours)

Definition and characteristics of services, Difference between goods and services, Role of services in tourism and hospitality, The service marketing triangle, Customer expectation from Hospitality services, The expanded marketing mix (7 Ps) in tourism and hospitality,

Unit II

Understanding Customer Expectations and Perceptions

(11Hours)

Customer expectations and perceptions of service, The concept of service encounters and moments of truth, Service quality models: SERVQUAL and GAP Model, Managing demand and capacity in services, Customer satisfaction and complaint management.

Unit III

Designing Service Marketing Strategies

(11Hours)

Market segmentation, targeting, and positioning for service offerings, Service product design and innovation, Branding services and destination marketing, Pricing strategies for services, Promotion and communication in service businesses.

Unit IV

Modern Marketing

(12Hours)

Green marketing, Mobile marketing, Cross-cultural marketing, Web marketing, Buzz marketing, Relationship marketing in hospitality: loyalty programs, CRM, personalization, Role of technology in service marketing, Social media and online reviews as marketing tools.

Exercises

The learners are required to:

1. analyze and present examples of the 7 Ps in a hotel/resort of their choice.
2. develop a customer feedback questionnaire for a hotel or travel agency.
3. develop a promotional campaign for a tourism destination
4. design a loyalty program for a hotel or travel firm.

Suggested Readings:

- Hoffman, K. D., & Bateson, J. E. G. (2017). *Services Marketing: Concepts, Strategies, and Cases* (5th ed.). Cengage Learning.
- Hudson, S. (2020). *Marketing for tourism, hospitality & events: A global & digital approach*. SAGE Publications.
- Kotler, P., Bowen, J. T., Makens, J. C., & Baloglu, S. (2016). *Marketing for Hospitality and Tourism* (7th ed.). Pearson Education.
- Lovelock, C., Wirtz, J., & Chatterjee, J. (2019). *Services Marketing: People, Technology, Strategy* (8th ed.). Pearson.
- Mariani, M. M., Baggio, R., Della Corte, V., & Buhalis, D. (2021). *Smart tourism: Foundations and developments*. Springer.
- Morrison, A. M. (2022). *Marketing and managing tourism destinations* (2nd ed.). Routledge.
- Solomon, M. R. (2022). *Consumer behavior: Buying, having, and being* (13th ed.). Pearson.
- Wirtz, J. (2022). *Services marketing: People, technology, strategy* (9th ed.). World Scientific Publishing.
- Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2020). *Services Marketing: Integrating Customer Focus Across the Firm* (7th ed.). McGraw-Hill Education.

Notes:

- 1. Suggested Readings will be updated and uploaded on college website from time to time.**
- 2. Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**

College of Vocational Studies

Insurance Management

Semester VIII

DSC-1	Asset Management
DSE-1	Fundamentals of Insurance-Linked Securities
DSE-1	Strategic Sales Management
DSE-2	Application to Data Analytics with R
DSE-2	Economics of Startups
GE Common Pool <u>for BA (VS) Insurance Management</u>	
1	Offered by Department of History
2	Offered by Department of Political Science
3	Offered by Department of Economics
4	Offered by Department of Mathematics
5	Tourism Startups and Innovations (Offered by Department of Tourism Management)

Semester VIII
DISCIPLINE SPECIFIC CORE COURSE (DSC- 8.1)

Asset Management

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Total Credits	Lectures	Tutorial	Practical	Eligibility	Prerequisite of the course
Asset Management	4	3	1	0	As Per University Norms	None

Learning Objectives

The aim of this course is to provide the students a comprehensive understanding of the concept and significance of asset management within the insurance sector, the historical evolution and contemporary scope of asset and liability management (ALM). key financial markets and instruments relevant to insurance investments. It equips the learners with knowledge of legal, regulatory, and ethical considerations impacting asset management in insurance companies. This course will provide the essential skills in the handling of risk and return in asset management, key risk metrics (e.g., beta, standard deviation), and develop portfolio management and asset allocation strategies, including global and currency risk management. The course focuses on exploring the investment styles: value, growth, and income investing, active vs. passive strategies including index funds and ETFs and portfolio performance using risk-adjusted measures.

Learning Outcomes

After completing this course, the learners would be able to:

- Define and describe asset and liability management and its role in insurance companies.
- Interpret historical developments and regulatory influences in asset management.
- Identify and compare various financial instruments and markets.
- Apply tools of fundamental, technical, and quantitative analysis for security selection.
- Formulate investment strategies tailored to the insurance investment framework.
- Quantify risk and return metrics and relate them to portfolio construction.
- Design portfolios aligned with risk-return preferences using modern portfolio theory principles.
- Evaluate portfolio performance using industry benchmarks and attribution models.

Unit1. Introduction to Asset Management: (10 hours)

Definition and importance of asset management. Historical perspective and evolution of asset management. Scope & objectives of asset & liability management in insurance business. Regulatory and ethical considerations: legal and regulatory aspects of asset management. Ethical considerations and fiduciary responsibilities.

Unit 2. Investment Alternatives: (11 hours)

Financial markets and instruments: overview of financial markets (stock markets, bond markets, derivatives markets, etc.). Types of financial instruments (stocks, bonds, options, futures, etc.). Market participants and their roles. Security market analysis and investment decision. Investment strategies and asset classes: equity investments. Fixed-income investments. Alternative investments. Security Analysis: Fundamental analysis. Technical analysis. Quantitative analysis.

Unit 3. Risk and Return: (12 hours)

Understanding risk and return trade-offs. Measures of risk (standard deviation, beta, etc.). Portfolio theory and diversification. Modern portfolio theory and efficient frontier. Asset Allocation: Asset allocation strategies and approaches. Asset allocation based on investor's risk tolerance and objectives. Portfolio Management: Active vs. passive portfolio management. Strategies for portfolio construction and optimization. Rebalancing and monitoring portfolios. Portfolio risk management: hedging strategies. Derivatives for risk management. International asset management: global asset allocation. Currency risk management.

Unit 4. Investment Strategies: (12 hours)

Value investing. Growth investing. Income investing. Alternative investments (real estate, private equity, hedge funds, etc.). Investment Management Styles: Active management. Passive management (index funds and ETFs). Factor-based investing. Performance Evaluation and Measurement: Risk-adjusted performance measures (Sharpe ratio, Treynor ratio, etc.). Benchmarking and tracking error. Performance attribution.

Suggested Readings:

Bodie, Z., Kane, A., & Marcus, A. J. (2021). *Investments* (12th ed.). McGraw-Hill Education.

Fabozzi, F. J. (2015). *Bond markets, analysis, and strategies* (9th ed.). Pearson Education.

Reilly, F. K., & Brown, K. C. (2011). *Investment analysis and portfolio management* (10th ed.). Cengage Learning.

CFA Institute. (2020). *CFA Program curriculum* (Levels I–III). Wiley.

Elton, E. J., Gruber, M. J., Brown, S. J., & Goetzmann, W. N. (2014). *Modern portfolio theory and investment analysis* (9th ed.). Wiley.

Maginn, J. L., Tuttle, D. L., Pinto, J. E., & McLeavey, D. W. (2007). *Managing investment portfolios: A dynamic process* (3rd ed.). CFA Institute & Wiley.

Swensen, D. F. (2009). *Pioneering portfolio management: An unconventional approach to institutional investment* (Updated ed.). Free Press.

Litterman, R. (Ed.). (2003). *Modern investment management: An equilibrium approach*. Wiley.

Strong, R. A. (2011). *Practical investment management* (4th ed.). Cengage Learning.

Statman, M. (2011). *What investors really want: Know what drives investor behavior and make smarter financial decisions*. McGraw-Hill Education.

Semester VIII

DISCIPLINE SPECIFIC ELECTIVE COURSE (DSE-I 8.1)

Fundamentals of Insurance-Linked Securities

Offered by Commerce Department, College of Vocational Studies

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Total Credits	Lectures	Tutorial	Practical	Eligibility	Prerequisite of the course
Fundamentals of Insurance-Linked Securities	4	3	1	-		

Learning Objectives

This course will help students to gain knowledge of securitization and insurance-linked securities (ILS), the benefits, costs, and issuing structures of ILS, the role of capital markets in supporting the insurance sector through securitization. The course begins by introducing to the key aspects of Capital Market Instruments Relevant to Insurers. Students will be acquainted with the range of capital market instruments available to insurers, Alternative Risk Transfer (ART) mechanisms. This course will help students to know about Non-Life Securitisation and Life Securitisation

Learning Outcomes

After completing this course, the learners would be able to:

- Describe the concept and application of securitization and ILS in insurance.
- Identify the sources of basis risk and strategies to minimize it.
- Recognize capital market instruments relevant to insurance investment and risk transfer.
- Explain the role and benefits of ART and insurance derivatives.
- Demonstrate understanding of catastrophe risk modelling, especially in the Indian context.
- Compare and contrast reinsurance with securitisation strategies for non-life risks.
- Assess investor motivations and the modelling frameworks used in non-life ILS.
- Describe life insurer structures and risks relevant to securitisation.
- Identify the roles of key stakeholders in life ILS transactions.

Unit 1. Overview of securitization(10 hours)

An overview of securitization. Insurance-linked securities: overview, costs and benefits, structural features, issuing vehicles. Structure and functions of capital markets insurance sector as a participant and beneficiary of capital markets. Basis risk: definition basis risk. Quantifying basis risk. Measures for pro rata hedges. Measures for digital hedges. Measuring positive basis risk. Minimising basis risk. Over-hedging. Sources of basis risk. ILS portfolio monitoring systems.

Unit 2. Capital market instruments relevant to insurers(11 hours)

Capital market instruments relevant to insurers (bonds, equity, hybrid instruments), role of capital markets in insurance risk transfer. Emergence of alternative risk transfer (ART) mechanisms. Role of capital markets in ART. Insurance derivatives. Derivatives and Alternative Risk Transfer. General characteristics of derivatives. Exchange-traded insurance derivatives. Exchange-traded catastrophe derivatives. Exchange-traded temperature derivatives. Catastrophe Risk modelling: An Indian context.

Unit 3. Non-Life Securitisation (12 hours)

Market overview, background and evolution. Market dynamics. Cedants' perspectives on non-life securitization: insurance-linked securities as part of advanced risk intermediation. Objectives of insurance companies. Reinsurance vs securitisation. Keeping risk vs transferring it. Limits and success factors to securitisation. Securitisation as a diversification from traditional retrocession. Indemnity triggers. Scope of coverage. Payout timing. Loss verification. Transparency. Non-indemnity triggers. Parametric triggers (pure and index). Industry loss triggers. Modelled loss triggers. Choosing the optimal trigger. Basis risk from the cedant's perspective. Risk modelling. The investor perspective (non-life).

Unit 4. Life Securitisation (12 hours)

General features of life insurance-linked securitisation. Life insurer corporate and business structures, risks and products. Mutual life offices. Proprietary life offices. Other forms of life office. Principal risks associated with life insurance business. Principal product types and associated risks. Actors and their roles. Sponsor. Investors. Regulators. External professional advisers. Ratings agencies. Monoline insurers. Liquidity providers. Swap providers. Cedants' perspectives on life securitisation. Rating methodology. Life securitisation: risk modelling life insurance securitisation: legal issues. The investor perspective (life). Longevity securitisation: specific challenges and transactions. Longevity risk transfer: indices and capital market solutions.

Suggested Reading:

Barrieu, P., & Albertini, L. (2009). *The handbook of insurance-linked securities*. Wiley.

Cummins, J. D., & Weiss, M. A. (2009). Convergence of insurance and financial markets: Hybrid and securitized risk-transfer solutions. *Journal of Risk and Insurance*, 76(3), 493–545. <https://doi.org/10.1111/j.1539-6975.2009.01307.x>

Lane, M. N. (Ed.). (2012). *Alternative risk transfer: Integrated risk management through insurance, reinsurance, and the capital markets*. Risk Books.

Cowley, A., & Cummins, J. D. (2005). Securitization of life insurance assets and liabilities. *Journal of Risk and Insurance*, 72(2), 193–226. <https://doi.org/10.1111/j.1539-6975.2005.00052.x>

Swiss Re. (2003). *The role of capital markets in the insurance industry*. Sigma, 5.

IAA Risk Book. (2020). *Chapter 7: Insurance-Linked Securities*. International Actuarial Association. <https://riskbook.actuaries.org/>

Bodoff, N. M. (2009). Measuring basis risk in catastrophe bonds. *Variance: Advancing the Science of Risk*, 3(1), 73–90.

Semester VIII

DISCIPLINE SPECIFIC ELECTIVE COURSE -DSE-I 8.1

Strategic Sales Management

Offered by Commerce Department, College of Vocational Studies

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course Title & Code	Total Credits	Lectures	Tutorial	Practical	Eligibility	Prerequisite of the course
Strategic Sales Management	4	3	1	-		

Learning Objectives:

The aim of the paper is to acquaint the students with importance of sales in the insurance industry, characteristics and challenges of selling intangible insurance products, key drivers of successful insurance sales strategies. The knowledge acquired by the students would help them to strategic planning for sales and execution in insurance. The course aims to provide the learners an understanding of the customer relationship management and sales technology in insurance and performance management and contemporary issues in insurance sales.

Learning Outcomes:

After completion of the course, learners will be able to:

- Explain how the sales function contributes to achieving insurance business goals.
- Evaluate customer needs and risk profiles to develop compelling insurance value propositions.
- Demonstrate goal-setting and performance management strategies in a strategic sales context.
- Formulate SMART strategic sales objectives aligned with business goals.
- Develop integrated sales strategies across multiple insurance sales channels.
- Understand sales forecasting, budgeting, and ROI evaluation in the insurance context.
- Explore strategies for acquiring and retaining insurance customers.
- Understand methods to build and maintain long-term customer relationships.
- Develop and implement KPI-based performance management frameworks.

Unit I. Foundations of strategic sales in insurance(10 hours)

Understanding the strategic sales function in insurance: evolution of sales, the strategic role of sales in achieving organizational goals, aligning sales with overall business strategy in the insurance sector. The unique landscape of insurance sales: intangibility of insurance products, the role of trust and relationships, regulatory environment and compliance, ethical considerations in insurance sales. Key drivers of sales success in insurance: understanding customer needs and risk profiles, value proposition development for insurance products. Developing a strategic sales mindset: goal setting, performance management, continuous learning and adaptation, fostering a customer centric sales culture within insurance organizations.

Unit 2. Strategic sales planning and execution in insurance(11 hours)

Market analysis and segmentation in insurance: identifying target customer segments (individual, corporate, specific industry niches), understanding their insurance needs and buying behaviours, market trends and competitive analysis in the insurance industry. Developing strategic sales objectives and goals: setting smart (specific, measurable, achievable, relevant, time-bound) objectives for sales volume, market share, customer acquisition, and retention in insurance. Formulating sales strategies: choosing appropriate sales approaches (direct sales, agency networks, online channels), developing channel strategies, and integrating different sales channels effectively, sales forecasting and budgeting in insurance: techniques for forecasting insurance sales, allocating resources effectively, managing sales expenses, and measuring return on sales investments.

Unit 3. Customer relationship management and sales technology in insurance(12hours)

Strategic customer acquisition and retention in insurance: identifying and targeting potential customers, lead generation strategies specific to insurance, building trust and rapport, strategies for retaining policyholders and maximizing customer lifetime value. Building long-term customer relationships in insurance: strategies for proactive communication, providing ongoing value, handling customer queries and complaints effectively, and fostering customer loyalty. Measuring and analysing customer relationship metrics in insurance: tracking customer satisfaction, retention rates, net promoter score (NPS), and other key metrics to improve relationship management efforts. Leveraging sales technology and digital tools in insurance: exploring the role of online platforms, mobile applications, data analytics, ai-powered tools, and social media in enhancing insurance sales effectiveness.

Unit IV: Performance management and contemporary issues in insurance sales: (12 hours)

Designing effective sales performance management systems in insurance: setting key performance indicators (KPIs) for individual sales representatives and teams (e.g., premium generated, number of policies sold, cross-selling ratios, customer satisfaction scores). Sales force motivation and compensation in insurance: developing effective compensation plans (salary, commission, bonuses), designing incentive programs, and fostering a motivated and high-performing sales team. Sales training and development in the insurance sector. Sales leadership in insurance: role of sales leaders in strategy formulation and execution, motivating and managing insurance sales teams. Emerging trends and challenges in insurance sales.

Suggested Readings:

Anderson, R. E., & Dubinsky, A. J. (2004). *Personal Selling: Achieving Customer Satisfaction and Loyalty*. Houghton Mifflin.

Kotler, P., & Keller, K. L. (2016). *Marketing Management* (15th ed.). Pearson Education.

Kotler, P., Rackham, N., & Krishnaswamy, S. (2006). *Ending the War Between Sales and Marketing*. Harvard Business Review.

McKinsey & Company. (2022). *Winning in Insurance Sales: Planning for the Future*.

Porter, M. E. (1996). *What is Strategy?* Harvard Business Review.

Walker, O. C., & Mullins, J. W. (2014). *Marketing Strategy: A Decision-Focused Approach* (8th ed.). McGraw-Hill Education.

Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2018). *Services Marketing: Integrating Customer Focus Across the Firm* (7th ed.). McGraw-Hill.

Semester-VIII

Discipline Specific Elective-DSE -II 8.3

Title of the Paper: Application to Data Analytics with R

Offered by Economics Department, College of Vocational Studies

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
VIII	Application to data analytics with R	4	2	0	2	Class 12th Pass	Nil

Learning Objectives:

This Paper provides a comprehensive introduction to R programming language and data analysis, with focus on vocational fields. It will equip learners with foundational knowledge and skills to use R for statistical computing and data analysis. Key learning objectives include understanding basic R syntax, working with data structures, performing data manipulation and analysis, and creating visualisations. Students will be able to grasp the reading, cleaning and transforming and manipulating data using the built-in functions and packages.

Learning Outcomes:

The students will be able to:

- Understand the basics of R programming language, including data types, variables, and control
- Learn to import, manipulate, and visualize data in R
- Apply statistical concepts and methods to real-world data using R
- Understand how to perform inferential statistics, including hypothesis testing and confidence intervals.
- Interpret the results of statistical analyses and communicate findings effectively

Unit I: Overview of R and its IDEs, Basics of R syntax and programming concepts, Data types, variables and operations in R, Control structures, Array, Matrix, Vectors, Factors, R packages, Handling missing values

(7 hours)

Unit II: Data manipulation and preparation: Importing and exporting data in text, excel, Stata format, Data cleaning, sorting and preparation with dplyr, Data transformation using tidyr. Functions: Built in functions, Creating custom functions, conditional statements, Loops, apply, Lapply, sapply
(15 hours)

Unit III: Data analysis and statistics: Descriptive statistics and exploratory data analysis, Hypothesis testing and inferential statistics, Regression analysis vs correlation, Simple regression, multiple regression, OLS, Assumptions of classical Normal Linear regression model, Auto correlation, heteroscedasticity, Time series data

Data visualisation with R: Adding layers, themes and customization using ggplot2, interactive visualisation with plotly

(15 hours)

Unit IV: Advanced analytics and introduction to machine learning.

Project work : Extracting unit level data and Analysing it with the help of appropriate tools
(8 hours)

Practical Exercises:

The learners are required to:

1. Loading and cleaning of data sets
2. Performing data analysis, creating visualisation and generating reports

Suggested Readings:

- Gardner, M. (2008). *Beginning R: The statistical programming*, Wiley & Sons.
- Verzani, J. (2014). *Using R for introductory statistics* (2nd ed.). Chapman & Hall
- The R Guide
- Gujarati, D.N. et al (2018) *Basic Econometrics* (5th ed), McGraw Hill India.

Notes:

1. Suggested readings shall be updated and uploaded on the college website from time to time.
2. Examination scheme and mode shall be prescribed by the Examination branch, University of Delhi from time to time.

Title of the Paper: Economics of Startups
Offered by Economics Department, College of Vocational Studies

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Semester	Course title & Code	Credits	Duration (per week)			Eligibility Criteria	Prerequisite
			Lecture	Tutorial	Practical/ Practice		
VIII	Economics of Startups	4	3	-	1	Class XII	Nil

Learning Objectives:

The learning objectives of this paper are to understand and analyse the economics of startups. The paper also intends to apply economic concepts to market price and output determination. Startups and entrepreneurship culture will help to reduce problems associated with economy. The aim of this paper is to inspire the current learners to create new startups by providing them the ability to generate new ideas.

Learning Outcomes:

The students will be able to:

- Develop a start-up Enterprise with Big Idea Generation.
- Analyse start-up capital requirement by analysing legal factors.
- Interpret feasibility Analysis towards funding issues.
- Access growth stages in new venture and reasons for scaling ventures.

Unit I: Market imperfection concepts and problems in macroeconomics – Nature of the firm, price and output determination in monopoly, oligopoly and monopolistic competition; problems of inequality, poverty, unemployment and inflation in a economy.

(10 hours)

Unit II: Startups- overview, structure, concepts and terminologies, Startups as an economic tool, Need of startups for reducing inequality, poverty, unemployment and inflation; new ideas and thinking about doing business, factors affecting startups, removing obstacles to entrepreneurship.

(13 hours)

Unit III: Indian startups ecosystem – drivers, challenges and pillars; financing of startups in India; entrepreneurship and startups culture in India; needs and opportunities of startups in Indian economy.

(11 hours)

Unit IV: Startup action plan in India, Initiatives and government policies to encourage startups in India; status of startups in India in past one decade.

(11 hours)

Practical Exercises:

The learner will analyse one startup and accordingly make the plan to set up a new startup with his new ideas.

Suggested Readings:

- Case, Karl E. & Ray C. Fair: Principles of Economics, Pearson Education, Inc., latest edition; page no. 269-328, 367-387, 441-456.
- Coase, R.H. (1937), The Nature of the Firm, *Economica*, vol. 4 (16), page 386-405.
- World Bank Group, Doing Business 2020, comparing business regulations in 190 economies (chapter 1 & 3).
- Lambert, T., Ralcheva, A. & Roosenboom, P. (2018), The crowd- entrepreneur relationship in startup financing. Chapter in book edited by Cumming, D. & Hornuf, L. (2018), *The Economics of Crowdfunding- Startups, Portals, and Investor Behaviour*, Palgrave macmillan Publication, Page no. 57-78.
- Mehmeti, V. & Musabelli, E. (2024), Start-ups: Importance and Role in the Economy, *Interdisciplinary Journal of Research and Development*, vol. 11, page 60-65.
- Bilan, I. & Apostoaie, M. (2023), Unemployment benefits, entrepreneurship policies, and new business creation, *Small Bus Econ*, Springer publication, vol. 61, page no. 1411-1436.
- Startup India, Draft Compendium of startup- specific initiatives, under central ministries, Government of India, Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, GOI.
- Korreck, S. (2019), *The Indian Startup Ecosystem: Drivers, Challenges and Pillars of Support*, ORF Occasional Paper, Observer Research Foundation.
- Singh, Vijay K. (2020), Policy and Regulatory changes for a successful Startup revolution: Experiences from the Startup Action Plan in India, ADBI working paper series 1146, Asian Development Bank Institute.
- Nine Years of Startup India (2025), Research Unit, Press Information Bureau, Government of India, Ministry of Commerce and Industry, GOI.
- Singh, P. (2022), *Entrepreneurship and Startups Culture in India*, Bharti Publication New Delhi, (Edited book).

Notes:

1. Reference readings shall be updated and uploaded on the college website from time to time.
2. Examination scheme and mode shall be prescribed by the Examination branch, University of Delhi from time to time.

Semester VIII
Generic Elective Course -GE-8.1
Tourism Startups and Innovations
Offered by Tourism Management Department, College of Vocational Studies
Credit Distribution, Eligibility and Pre-Requisite of the Course

Course Title and Code	No. of credits	Components of the course			Eligibility Criteria	Pre-requisites of the course
		Lecture	Tutorial	Practical		
Tourism Startups and Innovations G.E.- 8.1	4	3	1	0	Pass in Class XII	NIL

Learning Objectives:

The course aims to introduce students to the foundational concepts of entrepreneurship and innovation within the tourism sector. It explores the dynamics of the tourism startup ecosystem, including various business models and funding sources that support entrepreneurial ventures. By fostering creativity and problem-solving, the course encourages students to design innovative tourism services and products that respond to market needs. Additionally, it focuses on developing practical skills essential for planning, launching, and managing a successful tourism startup, preparing students to contribute meaningfully to the evolving landscape of the tourism industry.

Learning Outcomes:

After completing this course, the learners would be able to

1. understand entrepreneurship fundamentals and innovation frameworks in tourism.
2. analyze case studies of successful tourism startups and identify key success factors.
3. develop/create a business model for a tourism startup using tools like the Business Model Canvas.
4. pitch a startup idea addressing real-world tourism challenges.

5. evaluate the feasibility and sustainability of proposed tourism startup ideas.
6. assess the impact of innovation on competitiveness and value creation in tourism enterprises.
7. apply innovative thinking and sustainable approaches in tourism product development.

Unit-I

Introduction to Tourism Entrepreneurship and Innovation (10 Hours)

Entrepreneurship in tourism: Characteristics, types, and roles, Innovation in tourism: Process, need, and significance, Creative thinking, design thinking, and idea generation techniques, Overview of the tourism startup ecosystem (incubators, accelerators, angel investors)

Unit II

Business Models and Planning for Tourism Startups (15 Hours)

Business Model Canvas: Value proposition, customer segments, revenue streams, Tourism startup planning: Market research, feasibility study, risk analysis, Legal structure and licensing requirements for tourism enterprises, Branding and positioning strategies in tourism startups.

Unit III

Digital Innovation and Technology in Tourism Startups (10 Hours)

Role of digital platforms, AI, and mobile apps in tourism innovation, Smart tourism, virtual reality (VR), and augmented reality (AR) experiences, Social media marketing, e-commerce, and online distribution in startups, Case studies: Airbnb, Tripoto, Klook, OYO Rooms, etc.

Unit IV

Funding, Growth, and Sustainable Innovation (10 Hours)

Sources of startup funding: Bootstrapping, venture capital, crowdfunding, Growth hacking strategies and scalability in tourism ventures, Social entrepreneurship and sustainable innovation in tourism, Challenges and failures in tourism startups: Learning from setbacks.

Exercises:

The learners are required to:

1. pitch a tourism startup idea to a mock investor panel (Shark Tank-style).
2. group project: Develop a sustainable tourism startup proposal.
3. prepare a Business Model Canvas for a proposed tourism startup.

4. conduct a SWOT analysis of a local tourism venture.
5. design a basic digital marketing strategy for a tourism startup.
6. make presentation on: technology driven tourism business models.

Suggested Readings:

- Correia, A., Lopes, J. D., & Portugal, M. (Eds.). (2024). *International Case Studies in Innovation and Entrepreneurship in Tourism*. Routledge.
- Hallak, R., & Lee, C. (Eds.). (2024). *Handbook of Tourism Entrepreneurship*. Edward Elgar Publishing.
- Aguiar-Quintana, T., Day, J., & Álamo-Vera, F. R. (Eds.). (2024). *Corporate Entrepreneurship and Innovation in Tourism and Hospitality*. Routledge.
- Gupta, A., George, G., & Fewer, T. J. (2024). *Venture Meets Mission: Aligning People, Purpose, and Profit to Innovate and Transform Society*. Stanford University Press.
- McClanahan, P. (2024). *The New Tourist: Waking Up to the Power and Perils of Travel*. Simon & Schuster.
- Baggio, R., & Del Chiappa, G. (2017). *Tourism destinations and eTourism: Digital marketing practices*. Channel View Publications.
- Morrison, A. M. (2019). *Hospitality and travel marketing (5th ed.)*. Cengage Learning.
- Guttentag, D. A. (2015). *Airbnb: Disruptive innovation and the rise of an informal tourism accommodation sector*. *Current Issues in Tourism*, 18(12), 1192–1217.
- Cooper, C. (2016). *Innovation in tourism: Applying the diffusion of innovation model*. *Tourism Recreation Research*, 41(3), 301–304.
- Osterwalder, A., & Pigneur, Y. (2010). *Business model generation: A handbook for visionaries, game changers, and challengers*. Wiley.

Notes:

1. Suggested Readings will be updated and uploaded on college website from time to time.
2. Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.

