

Pattern of Entrance Test for Admission to Ph.D. and M.Phil Course in Commerce

For PhD Course Work: 50 MCQs carrying 2 marks each (negative ½ mark for each wrong answer) will be set, out of which 25 questions will be from Research Methodology and 25 questions from all the subjects covering the M.Com syllabus, NBU.

For M.Phil: 50 MCQs carrying 2 marks each (negative ½ mark for each wrong answer) will be set, out of which 25 questions will be from Research Methodology and 25 questions from all the subjects covering the M.Com syllabus, NBU.

The duration will be 1 hour for both M.Phil and PhD coursework entrance test. The qualifying marks for both the tests will be 50% as per M.Phil and PhD regulations of NBU and UGC Rules.

A: DETAILED SYLLABUS OF RESEARCH METHODOLOGY

1. Statistics

Descriptive Statistics: An overview of central tendency, dispersion and skewness;

Probability Theory: Classical, relative and subjective probability, Addition and multiplication probability models; Conditional probability and Baye's Theorem.

Probability Distributions: Binomial, Poisson, and normal distributions; Their characteristics and applications. Sampling and sampling methods; Sampling and non-s Sampling errors; Law of Large Number and Central Limit Theorem; Sampling distributions and their characteristics

OLS and Properties of OLS Estimators: Ordinary Least Square; Goodness of fit, Autocorrelation, Homoskedasticity, Properties of estimators; Statistical significance of the estimators; Correlation Analysis

Multivariate Analysis: Multiple and Partial Correlation, Multicollinearity, Dummy Variable; Factor Analysis, Discriminant Analysis.

Statistical Estimation and Testing: Point and interval estimation of population mean, proportion, and variance; Statistical testing of hypothesis and errors; Large and small sampling tests—Z, t and F tests. Non-Parametric Tests: Chi-square tests; Sign tests; Wilcoxon Signed Rank tests; Kruskal-Wallis test.

Index Numbers: Meaning and types; Weighted aggregative indices-Laspeyre's and Paasch's indices; Laspeyre's and Pasch's indices compared, indices of weighted average of (price and

quantity) relatives; Tests of adequacy Special problems—shifting the base; splicing, overlapping index series; Uses and problems of Index number

Time Series Analysis; Trend Analysis

2. Operations Research:

Management Science - Basic concepts and its role in decision- making; Linear programming, meaning, scope & assumptions. Formulation of linear programming problem & solution by graphical & Simplex methods. Some special cases like degeneracy, un-boundedness, infeasibility and multiple optimal solutions; Sensitivity analysis; Integer programming, goal programming, dynamic programming and non-linear Programming; Transportation and Assignment models including trans-shipment and routing problems; Some special cases like minimization , unbalanced problems, degeneracy in transportation models. Queuing theory; Inventory management techniques; PERT/CPM; Decision theory and decision trees; Game theory; Simulation.

3. Marketing Research:

1. Marketing Research: Definition, Scope, Significance, Limitations, Obstacles in Acceptance; Ethics in Marketing Research; Marketing Intelligence system

2. Research process: Management dilemma (problem) – decision problem – research problem – hypothesis statement – characteristics of a good hypothesis – drafting the research proposal. Methods of collecting Market Information; Secondary data: sources; problems of fit and accuracy; Syndicated services.

2. Marketing Mix Research: Concept testing, Brand Equity Research, Brand name testing, Commercial eye tracking – package designs, Conjoint analysis, Multidimensional scaling - Positioning research, Pricing Research, Shop and retail audits, Advertising Research – Copy Testing, Readership surveys and viewer ship surveys, Ad tracking, viral marketing research. Marketing effectiveness and analytics research: Customer Satisfaction Measurement.

3. Research designs – Descriptive designs - Longitudinal and cross-sectional analysis; Qualitative research techniques –a) Based on questioning: Focus groups, Depth interviews, Projective techniques. b) Based on observations: ethnography, grounded theory, participant observation

4. Causal research – Basic experimental designs – internal and external validity of experiments.

5. Primary data – Questionnaire design - Administration and analysis considerations in design - Attitude measurement – scaling techniques. Observation method of primary data collection; Web based primary data

collection – issues of reach, analysis, accuracy, time and efficiency.

6. Sampling – sampling methods – sampling and non-sampling errors – sample size calculation (Numericals expected) – population and sample size - large and small samples - practical considerations in determining sample size.

7. Data analysis – Univariate analysis – Bivariate analysis – Multivariate analysis. Simple and cross tabulation, simple and multiple regression, Factor analysis. Types of tests and test selection, One sample test, Two-Independent Sample tests, Two-related sample tests.

8. Report writing – forms of report – fundamentals of a good report.

B: DETAILED SYLLABUS FOR CORE COURSES:

50% questions of Paper I and Paper II will be based on the syllabus of the following core courses.

CP-101: Management Process and Organizational Behaviour

Evolution of management thought: Systems and contingency approach for understanding organizations; Managerial processes, functions, skills and roles in an organization. Delegation and decentralization, Span of Management, Leadership and influence process; Work Motivation. Understanding and Managing organizational system—Organizational design and structure, Work stress, Organizational Change and development; Communication, Conflict Management; Stress Management.

CP— 102: Managerial Economics

Nature and scope of Managerial Economics. Importance of Managerial decision—making; Marginal analysis; Objective of a firm, Demand function, Elasticity of demand and its significance in Managerial decision-making; Consumer equilibrium-utility and indifference curve approach; Price, income and substitution effects; Fundamentals of demand estimation and forecasting; Short-run and long-run production functions; Cost curves and economics of scale; Price and output determination under perfect competition, monopoly, monopolistic competition, and oligopoly; Pricing strategies and tactics; National Income— alternative concepts and measurement of National income; Inflation—types, measurement and control; Balance of Payments; Monetary and Fiscal Policies.

CP-103: Business Environment

Nature, components and determinants of business environment, dynamics of business environment, key indicators; Risk in business environment, Assessing business environment — country risk and political risk.

Current state of business environment in India Economic reforms — Liberalisation, privatisation, globalisation, industrial policy and industrialisation trends, public enterprise reforms and disinvestment programmes; competitive environment; financial environment

India's current balance of payment position, globalisation trends, Trade reforms & trends, FDI policy & trends, India's share in world economy. Trends in global trade & investment; Nature & operations of multilateral economic institutions- World Bank, WTO IMF and their impact on Indian business environment. Factors of global competitiveness.

CP—104: Accounting for Managers

Financial Accounting - Meaning, scope and importance; Accounting concepts and conventions; Formation and importance of accounting Standards; Accounting process; Depreciation accounting and policy, Preparation of final accounts of non—corporate entities, Proforma of Balance Sheet of Joint—stock Companies, Cost-accounting : nature and scope of costing; Cost concepts and Classifications; Usefulness of Costing to Managers; Preparation of Cost-Sheet.

Management Accounting : Nature, scope and tools of Management Accounting; Management Accounting vs. Financial accounting; Financial analysis, Ratio analysis, Funds-Flow Statement, Cash-flow Statement

Budgeting: Types of budgets and their preparation, Performance budgeting and Zero-base budgeting.

Marginal costing : Break—even analysis. Decision involving alternative choices.

Standard Costing: An Overview

CP-105: Computer Applications in Commerce

Computers: An introduction; Computers in business; Elements of computer system set-up; Indian computing environment; components of a computer system Computer languages; Number system PC- Software Packages - An Introduction - Disk Operating System and Windows; Introduction to Word Processor. Introduction to a spreadsheet software; Creation of spreadsheet applications; Range, Formulas, Functions, Data Base Functions in spreadsheet; Graphics on Spreadsheet; Data Files- Types/Organization; Master & Transaction File; Relevance of Data Base Management; Systems and Integration of Applications; Basics of Data Processing; Data Hierarchy & Data File Structures. Network Fundamentals, Analog and Digital Signals, Band width, Network Topology, Network Applications.

CP—106: Marketing Management

Nature, scope and concept of marketing, Corporate orientations towards the marketplace; The Marketing environment and Environment scanning; Marketing information system and Marketing research; Understanding consumer and Industrial markets; Market segmentation, Targeting and positioning; Product decisions —product mix, product life cycle, new product development, branding and packaging decisions; Pricing methods and strategies; Promotion decisions— promotion mix, advertising, sales promotion, publicity and personal selling; Channel management - Types and functions, Selection, Cooperation and conflict management, vertical

marketing implementation and systems, Marketing Logistics; Organizing and implementing marketing in the organization; Evaluation and control of marketing efforts; Ethics in Marketing; New issues in marketing - Globalization, Consumerism, Green Marketing, Direct Marketing, Network Marketing, Event Marketing.

CP-107: Human Resource Management

Concepts and Perspectives on Human Resource Management; Human Resources Management in a changing environment; Corporate objectives and Human Resource Planning; Career and succession planning; job analysis; Methods of manpower search; Attracting, Selecting and retaining human resources; Induction and socialization; Manpower training and development; Performance appraisal and potential evaluation; Job evaluation and compensation; Employee welfare; Industrial relations & trade unions; Dispute resolution & grievance management.

CP—108: Financial Management

Introduction to financial management Objectives of financial management; Time value of money, sources of finance, Investment decisions: Importance, Difficulties determining cash flows, methods of capital budgeting Risk analysis : Cost of capital; Concept and importance, Computations of cost of various sources of finance; Weighted Average Cost of Capital; Capital Structure decisions; Theories of capital structure, Factors determining capital structure. Optimum capital structure; Management of working capital - Cash, Receivables and Inventory Management, Internal Financing and Dividend Policy; Financial Modelling.

CP – 109: E – Commerce

Introduction to Electronic Commerce: Framework, applications; network infrastructure (including internet). Internet commercialization

Electronic payment system, inter-organizational commerce & intra—organizational commerce, EDI, value-added network, digital library;

Security, advertising & marketing on the internet, introduction to e CR.M. Consumer search & resource discovery, computer based education & training, digital copyrights.

Fundamental of mobile computation and wireless computation, multimedia & digits] video, software agents; characteristics & properties, technology, tote—script, agent language, applets & browse.

