

# HEMCHANDRACHARYA NORTH GUJARAT UNIVERSITY, PATAN.

## Ph. D. (Hospital Management) Entrance Examination Syllabus

### PART: A : RESEARCH METHODOLOGY [50%]

**NB:** The Research Methodology (PART:A) of 50 MCQs will constitute questions related to English Proficiency, Reasoning Ability, Basic Computer Skills; each of 5 questions – Total 15 and 35 Questions of subject specific Research Methodology.

<b>Unit:I</b>	Foundations of Research: Meaning, Objectives, Concept of theory, Deductive and inductive theory Characteristics of scientific method, Understanding the language of research - Concept, Construct, Definition, Variables – Research Process - Objectives of Research, Motivations in Research, Types Of Research- Significance of Research-Criteria of Good Research.
<b>Unit:II</b>	Problem Identification & Formulation – Research Question – Investigation Question – Measurement Issues – Hypothesis – Qualities of a good Hypothesis –Null Hypothesis & Alternative Hypothesis- Hypothesis Testing – Logic & Importance.
<b>Unit:III</b>	Research Design: Concept and Importance in Research – Features of a good research design – Exploratory Research Design – concept, types and uses, Descriptive Research Designs – concept, types and uses. Experimental Design: Casual relationship, Concept of Independent & Dependent variables, Concomitant variable, extraneous variable, Treatment, Control group.
<b>Unit:IV</b>	Qualitative and Quantitative Research: Qualitative research – Quantitative research – Concept of measurement, causality, generalization, replication. Merging the two approaches.
<b>Unit:V</b>	Measurement: Concept of measurement–Problems of measurement in research – Validity and Reliability. Levels of measurement – Nominal, Ordinal, Interval, Ratio.
<b>Unit:VI</b>	Attitude Scaling Techniques: Concept of Scale – Rating Scales viz. Dichotomous, Likert Scales, Semantic Differential Scales, Constant Sum Scales, Graphic Rating Scales – Ranking Scales – Paired Comparison & Forced Ranking.
<b>Unit:VII</b>	Types of Data: Secondary Data - Definition, Sources, Characteristics. Primary Data - Definition, Advantages and disadvantages over secondary data, Observation method, Questionnaire Construction, Personal Interviews, Telephonic Interview, Mail Survey, Email/Internet survey.
<b>Unit:VIII</b>	Sampling: Concepts of Statistical Population, Sample, Sampling Frame, Sampling Error, Sample Size, Non Response - Characteristics of a good sample - Probability Sample – Simple Random Sample, Systematic Sample, Stratified Random Sample & Multi-stage sampling. Non Probability Sample – Judgment, Convenience, Quota & Snowball sampling. Determining size of the sample - Practical considerations in sampling and sample size.
<b>Unit:IX</b>	Data Analysis: Data Preparation – Univariate analysis (frequency tables, bar charts, pie charts, percentages), Bivariate analysis – Cross tabulations - Hypothesis formulation, level of signification, degree of freedom, t-test, F-test, Chi-square test, ANOVA, Z-test.
<b>Unit:X</b>	Interpretation of Data and Paper Writing – Layout of a Research Report and research report writing, Journals in Hospital and Healthcare Management, Ethical issues related to publishing and Plagiarism.

**PART: B: HOSPITAL MANAGEMENT [50%]**

<b>Unit:I</b>	Basic concept of Health, Disease transmission, Concept of health indicators, Healthcare services, District Health Organization, Role of Economics in Healthcare, Concept of Micro and Macro Economics, Government Intervention in health care, Healthcare Cost analysis, Price elasticity, Cost of health care, Costing for decision making- Law of Demand, Demand for Medical Care, Law of Supply and Pricing of Health Care.
<b>Unit:II</b>	Concepts of Management, Evolution of Management thought: Traditional approach, Frederic W Taylor's scientific management, Henry Fayol's principles of management, concept of bureaucracy, human relations approach, Hawthorne experiments, Management Functions: planning, organizing, staffing, Directing, Co-coordinating and Controlling, Decision Making, Authority Power and Influence, Leadership theories, Concept of organizational behavior, Theories of Motivation, Formal and Informal Groups, Group behavior, Conflict Management, Stress Management.
<b>Unit:III</b>	Hospital & Accounting System, Generally Accepted Accounting Principles (GAAP) & Concepts, Accounting Process: Accounting cycle, Journal Entries, Ledgers ledger, posting, Trial Balance, Profit & Loss Account and Balance Sheet, Depreciation, Financial Statement Analysis, Financial Ratios, Time value of Money, Bond Valuation, Equity Valuation, Cost of Capital, Capital Budgeting, Leverage Analysis, Working capital management, Dividend decisions.
<b>Unit:IV</b>	Concept of Epidemiology, Epidemiological Triad, Use of Epidemiology with focus in Health Management, Measurements in Epidemiology, Epidemiological Methods :An Observational Studies: Descriptive studies, Analytic Studies, Descriptive Epidemiology, Cross Sectional Study, Case Control Study, Cohort Study, Experimental Studies, Infectious Disease & Clinical epidemiology, Demography.
<b>Unit:V</b>	Marketing concept, Marketing mix, Customer/patient Relationship Management, E-commerce, Services marketing, Patient satisfaction, SERVQUAL, Role of Human Resources Management in hospitals, Human Resource Planning, Job analysis, Job description, Job specification, Recruitment, Selection Process, Training, Wage and Salary Administration, Job evaluation, Performance appraisal methods , Labor Laws Applicable to Hospitals.
<b>Unit:VI</b>	Measures of central tendency, Measures of variation, Standard Deviation, Coefficient of Variation, Range, Probability, Probability Distributions, Binomial Distribution, Poisson Distribution, Normal Distribution & its Applications to Hospital Environment, Pearson's Correlation, Spearman's Rank Correlation, Partial correlation, Simple and Multiple Regression Equations, Testing of hypothesis, statistical tests.
<b>Unit:VII</b>	Assessing Quality Health Care, Quality Tools, Essentials of quality improvement in health care services, TQM, Kaizen, Certification & Accreditation of hospitals, IPHS- NABH Accreditation-ISO Certification- JCAHO - JCI Accreditation - Six sigma, Management Information System specific to hospital, Clinical information system, Medical Record, Nursing Information system, General medical records standards and policies, Legal aspects of medical records, Medical audit, Computerization of medical records , Uses of health and hospital data.

<b>Unit:VIII</b>	Purchase Management, Purchase System, Tendering procedures, Methods of payment, Inventory control, ABC /VED / SDE Analysis of inventory, Reorder level – Economic Order Quantity (EOQ), Store Management LIFO/FIFO- Latest trends in Materials Management.
<b>Unit:IX</b>	Legal requirements under Medical Council Act , Registration and Regulation Act, Legal Aspects of Patient Care, Patient rights & Responsibilities, Patient Consent, Legal aspects relating to organ transplantation, Termination of pregnancy, Euthanasia, Sale and administration of drugs, Legal liability of hospitals, Medical Mal Practices, Consumer Protection Act, (CPA), Medical negligence, FIR, Consumer Protection Act.-1986, Indian Penal Code, Indian Evidence Act, Criminal Procedure Code, Indian Medical Council Act, Maternity Benefit Act-1961., ESI Act-1948, Medical Termination of Pregnancy Act-1971, Organ Transplantation Act, The Pre Natal Diagnostic Test Act, 1994.
<b>Unit:X</b>	The Strategic Management Process, Levels of strategy, SWOT Analysis, Five generic competitive strategies, merger and acquisition strategies, vertical integration strategies, outsourcing strategies, Offensive strategies, defensive strategies- Related diversification strategies, Unrelated diversification strategies, Strategies for emerging industries ,high-velocity markets, Maturing industries, Stagnant or declining industries, maturing industries, fragmented industries, Industry leaders, Runner-up firms and weak & Crisis-ridden businesses, Corporate Culture.
<b>Unit:XI</b>	Importance of Strategic Cost Management in Hospital, Cross-Subsidization of Costs, Product Costing, Job-order and Process Costing, Costing of Service, Activity Based Costing (ABC) in a Corporate Hospital, Marginal costing, CVP analysis, Budgeting & Budgetary Control, Variance Analysis, Transfer Pricing.
<b>Unit:XII</b>	Outpatient services, Inpatient services, Accident and Emergency services, Rehabilitation services, Operation theatre, Intensive care units, Hospital acquired infections, Sterilization, Diagnostic Services, Nursing services, Nursing audit, Admission and Discharge Procedure, Billing Department, House Keeping, Medical Records, Bio– medical and maintenance departments, Central Store and Supply Department (CSSD), Utility / Auxiliary facilities, Transport services, Laundry services, Food and Beverages (dietary) services, Managing the Estate and Security arrangements.
<b>Unit:XIII</b>	Hospital Facilities Planning, Possibility of future expansion, Equipping a hospital, planning for ensuring safety, Planning Clinical Services, Planning Support Services, Facilities planning and hospital setup, Disaster Management, Mass Casualty Management, Hospital Disaster Plan , Disaster Drill, Security Technology, Hospital Fire Protection Radiation Hazards, Radiation safety Monitoring Hospital Acquired Infection (HAI), Health Insurance, Reinsurance & Third party administrator, IRDAI.