THEORY

<u>Syllabus</u>

FIRST SEMESTER

PAPER – I : BASIC CONCEPT OF HEALTH

Total Hours - 30

<u>Credit- 3</u>

Concept of Health and Disease

- Concept of health & disease and well being.
- > Natural history of disease and role of hospitals to offer various levels of care
- Prevention aspect of diseases
- Dynamics of disease transmission
- Changing pattern of diseases
- Concept of health indicators

Suggested Reading:

Code MHA 101

Textbook of Preventive & Social Medicine- Dr. K. Park

Preliminary Human anatomy and Physiology

- Basic concepts of human anatomy
- Basic concepts of human physiology

Suggested Reading:

- Human Anatomy- Prof. Samar Mitra
- Human Anatomy- Prof. A. K. Dutta
- Text Book of Human Physiology- Dr. C. C. Chatterjee

Common Pathological Conditions

- Basic concepts of pathogenesis of common diseases
- Basic concepts of interpretation of investigations reports

Suggested Reading:

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- Robbin's Textbook of Pathology Robbin, Cotran, Kumar
- Textbook of Microbiology Ananantanarayan & Paniker

Basic concepts of Pharmacology:

Commonly used Medicine in a hospital, Narcotic drugs, use and abuse of drugs. Dispensing of medicine, drugs store, drug stock / purchase of medicine, oxygen, I/V Fluid, Chemicals etc.

Suggested Reading:

Textbook of Pharmacology: Dr. K. D. Tripathi

PAPER - II : <u>HEALTHCARE SERVICES</u>

Code <u>MHA 102</u>

Total Hours - 30

Credit- 3

Demography & Vital Statistics

- Demography its concept
- Vital events of life & its impact on demography
- Significance and recording of vital statistics
- Census & its impact on health policy

Health scenario of India

Health scenario of India- past, present and future

National Health Policy & Population policy

- National Health Policy & Inter-sectoral Co-ordination
- National Population Policy
- National Five year plans

National Health Programme

Background objectives, action plan, targets, operations, achievements and constraints in various National Heath Programme.

Healthcare of the Community

- Healthcare delivery system in India at Primary, Secondary and Tertiary Care
- Indigenous system of medicine in India
- Community participation in healthcare delivery system
- Health system in developed countries.

Suggested reading:

- Textbook of Preventive & Social Medicine- Dr. K. Park
- Textbook of community medicine: V. K. Mahajan
- Population studies Asha Bhendre

PAPER III : HOSPITAL BASED HEALTHCARE & ITS CHANGING SCENARIO

Code <u>MHA 103</u>

Total Hours - 30

Credit- 3

Overview of Hospital

- > Concept of Modern Hospital & Privatization in Health Sector
- > Public Sector Hospitals and Level of care / offered facilities

- > Effects of Globalization in Health care
- Concept of Corporate Hospital in developing countries
- > Infrastructure and lay out of an ideal corporate hospital
- > Functioning of modern hospitals & changing need of patients
- Hospitality in Hospital Care
- > Invasive and non-invasive diagnostic facilities in modern hospital
- > Care offered in Specialty and Super specialty Hospitals

Suggested Reading:

Code MHA 104

- Hospital Management module II- NIHFW, New Delhi
- ✤ Hospital Administration G. D. Kunders
- Hospital Administration Tabish

PAPER IV : EPIDEMIOLOGY

Credit- 3

Total Hours - 30

- Principles of Epidemiology
- Natural History of disease
- Methods of Epidemiological studies
- > Epidemiology of communicable & non-communicable diseases, disease transmission
- > Host defense immunizing agents, cold chain, immunization, disease monitoring and surveillance.
- Screening and surveys
- > Investigation of an epidemic and role of hospital in its control.

Suggested Reading:

- Textbook of Preventive & Social Medicine- Dr. K. Park
- Textbook of community medicine: V. K. Mahajan

Code <u>MHA 105</u>

PAPER V : <u>HEALTH EDUCATION</u>

Credit- 3

Total Hours - 30

- > Aims & Principles of Health education
- > Methods of Health Education
- Effects of health education
- Levels & practice of health education
- > Need of Health education to attain positive health

Health care reporting and role of NIC

Suggested Reading:

- ✤ Health Education V. K. Mahajan
- Effective communication methods Asha Kaul
- Hospital Administration Tabish

PAPER VI : COMMUNICATION

Code <u>MHA 106</u>

Total Hours - 30

Credit- 3

- > IEC activities in health sector
- Basic concepts & principles of good communication
- Special characteristics of health communication
- Types & process of communication
- ➢ Barriers of communication & how to overcome
- Communication with the media / press
- Counseling in health care & its different methods
- Management and co-ordination of IEC activities

Suggested Reading:

- Effective Business Communication
- ✤ Health Education V. K. Mahajan
- Effective communication methods Asha Kaul
- Hospital Administration Tabish

PAPER VII : BASIC INFORMATION TECHNOLOG

Code <u>MHA 107</u>

Total Hours - 30

- Basic concepts about computer Hardware & Software
- Working knowledge of commonly used hospital software
- > Application of Computer in hospitals
- Computer programme and operating system
- Data Based Concept (ER diagram)
- Microsoft Office, SQL, V.B.
- ➢ ERP system with all modules

- Importance of effective Health Information system
- Digital maintenance of Medical Records

Suggested Reading:

Code <u>MHA 108</u>

- An introduction to computers
- Peter Norton Tata McGraw Hill
- Computers today S. K. Basandra Galgolia Books
- Introduction to Computers C. Xavier New Age publishers

PAPER VIII : PRINCIPLES OF MANAGEMENT

Total Hours - 30

<u>Credit- 3</u>

- History and growth of management science
- > Traditional management vs. modern health care management
- Evolution of management theory
- ▶ Healthcare management as a profession
- Evaluation of Management Concepts
- Management components i.e. Planning, Organizing, Staffing, Motivating, Leading, Co-ordination and Controlling.
- Modern Management concept and its implication in health sector

Suggested Reading:

Code MHA 109

- Principles of Management L. M. Prasad S. Chand
- Essential Management Koontz Tata McGraw Hill
- Management Peter Drucker

PAPER IX : ORGANIZATIONAL BEHAVIOUR (O. B.)

<u>Total Hours – 30</u>

- Concept of Organizational Behaviour
- Major Components of organizational behaviour Personality development, Motivation, Group, Leadership, Cooperation and Conflict
- > Behavior of people of their work place and its relation in team building for achieving organizational goals
- Sociology and Anthropology,
- Basics of Psychology
- Characteristics of workgroups

- Dynamics of organizational behavior
- Motivation and Leadership
- Conflict management
- Transactional analysis

Suggested Reading:

Code <u>MHA 110</u>

- ♦ Organization Behavior S. P. Robbins Prentice Hall
- Organizational Behavior Fred Luthans McGraw Hill
- ♦ Organizational Behavior M. L. Prasad S. Chand

PAPER X : <u>QUANTITATIVE MANAGEMENT</u>

Total Hours - 30

Credit- 3

- Basic concepts Introduction, Definitions
- > The role of statistics in the estimation of burden of disease and the methods applicable to calculate the same.
- Basic Mathematics
- Collection, Presentation of Data
- Probability and Frequency of distribution
- Estimation and testing of hypothesis
- Index Number, time series
- Measurements of central tendency
- Measurement of dispersion
- Sampling and Sampling error
- Testing of hypothesis
- > Test of significance
- Correlation Regression

Suggested Reading:

- Statistics for management R. I. Levin and D. Rubin Prentice Hall
- Basic Statistics Goon, Gupta and Dasgupta World Press
- ♦ Business Statistics S. P. Gupta S. Chand

SYLLABUS

SECOND SEMESTER

PAPER – I : HOSPITAL SUPPORT SERVICES

Code <u>MHA 201</u>

Total Hours - 30

To consider various aspects of planning, operating and evaluation of different utility services in hospitals

- Methods of Sterilization CSSD
- > Nosocomial infection and hospital acquired infection control committee
- Laundry services
- Security Services (General & Others like fire, gas etc.)
- Transportation Services (External & Internal)
- Ambulatory Care
- Hospital Stores
- Mortuary (Preservation, transportation & religious formalities)
- Kitchen services
- House Keeping
- > Maintenance

Suggested Reading

Code <u>MHA 202</u>

- Principles of Hospital Administration S. A. Tabish
- ✤ Hospital Administration S. L. Goel
- Hospital Administration Francis
- Hospital Administration McGibony

PAPER – II : <u>MATERIAL MANAGEMENT</u> <u>Credit- 3</u> <u>Total Hours - 30</u>

To help, learn the scientific methods, materials and equipment planning, procuring, storing and dispensing scope, definition including maintenance

- Importance of material management
- > Principles of material management, material forecasting
- Inventory management and analysis
- Import formalities relating to Medical Equipments
- Letter of credit, service contracts.
- Purchase style, need assessment

- ➢ Tender system
- Condemnation and disposal
- Economic order quantity, safety stock, lead time
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Suggested Reading

- Materials Management Gopalakrishnan
- ✤ Materials Management Sundaram
- Inventory Control A. C. Dutta

PAPER – III : <u>PERSONNEL MANAGEMENT</u>

Credit-3

Code <u>MHA 203</u>

<u> Total Hours - 30</u>

To emphasize the importance of human resource in a hospital and to know in detail about the functions of personnel management

- > Concepts & Evolution of personnel Management in Hospital
- Public Relation
- Methodology & tools of Personnel Management
- ➢ Office rules & regulation & discipline
- Performance appraisal.

Suggested Reading

Code MHA 204

- Human Resources Management L. M. Prasad
- Personnel Management P. C. Tripathy
- Personnel Management-Mamoria

PAPER – IV : <u>BIOMEDICAL WASTE MANAGEMENT</u> <u>Credit- 3</u> <u>Total Hours - 30</u>

To understand the significance of nosocomial infections, biomedical waste and its proper disposal.

- Definition of Biomedical Waste
- > BMW Segregation, collection, transportation, disposal
- Liquid BMW, Radioactive waste, Metals / Chemicals / Drug waste

- BMW Management & methods of disinfection
- Modern technology for handling BMW
- Monitoring & controlling of cross infection (Protective devices)
- BMW from Administrative point (Budget, Health check-up, Insurance)

Suggested Reading

- Principles of Hospital Management S. A. Tabish
- Hospital Management S. L. Goel
- Hospital Administration Francis
- Bio-Medical Waste Act & Rules Govt. of India
- Current Issues In BMW Waste Handling-ISHA, Bangalore

Code MHA 205

PAPER – V : <u>INDUSTRIAL RELATIONS</u> Credit- 3

Total Hours - 30

To get an understanding about the industrial relations and its influence on the staff behavior.

To understand the policy covering wage and salary administration, to dispose of the grievance fairly and equitably.

- Wage fixation and collective bargaining
- > Definition, scope and importance of industrial relations
- Industrial Disputes Act
- Trade Unions
- Industrial relations in health services industries

Suggested Reading

- Human Resources Management and Industrial Relations P. C. Tripathy
- Managing Manpower in Industry Sahani
- Personnel Management- Mamoria

PAPER – VI : FINANCIAL MANAGEMENT – I

Code MHA 206

Total Hours - 30

<u>Credit- 3</u>

To understand the issues and scope of financial management

- ➤ Cash flow and fund flow
- Basics of financial management

- Issues and scope of financial management
- Recording Business transactions
- ➢ Financial Statement & its analysis
- > Fund allocation & department performance reports
- Concept of business plan, project plan

Suggested Reading

- Financial Management T. K. Maheshwari
- Business Finanace Dey & Dutta
- Principles of Accounting Sandip Sharma
- Financial Management Prakashan

PAPER VIII – <u>FINANCIAL MANAGEMENT –II</u> <u>Credit- 3</u> Total Hours – 30

Code <u>MHA 207</u>

To understand financial management's utility as an indispensable part of administration and quality control

- Elements of cost and costing methods
- Hospital Rate setting Managerial cost and Break-even analysis
- Cost control and cost reduction
- Budgeting Revenue and Capital Budgeting, Cash Budgeting
- > Productivity
- Resource mobilization
- Cost containment
- Money Market and Capital Market, Merger and acquisition.

Suggested Reading

- Basic Financial Management Khan
- Economics Lipsey

PAPER – VIII: HEALTH MANAGEMENT INFORMATION SYSTEM

Code <u>MHA 208</u>

Credit- 3

Total Hours - 30

To study the need of management and information together forming a system integration of different aspects of MIS and preparation of information system manual

- ➢ Why to have HMIS in Hospital set up
- ➢ Health Information System
- Hospital Information System
- Management Information System
- MIS as a tool to managerial control

Suggested Reading

- Management Information System Srivastava
- ✤ HIMS NIHFW Monograph, Govt. of India

PAPER – IX : <u>MARKETING MANAGEMENT – I</u> <u>Credit- 3</u> <u>Total Hours - 30</u>

Code <u>MHA 209</u>

To understand the role of marketing in health care industry, its importance in quality management and organizational development

- Basic concept of Marketing Management Consumer Behaviour
- Marketing research & information
- Pricing of various services
- Marketing strategy, evaluation and control
- Promotion of Business in Hospital
- Service Marketing Patient care and communication

Suggested Reading

- Marketing Management Kotler
- ✤ Service Marketing Management Kotler & Keller

PAPER – X : MARKETING MANAGEMENT – II

Code <u>MHA 210</u>

Credit-3

<u> Total Hours - 30</u>

To understand the market forces, which determine the services, rendered by the organization.

- Advertisement and Branding
- Marketing promotional activities
- Corporate marketing
- Marketing for TPA and Cash Patients
- Marketing and medical ethics
- Social aspect of marketing

Suggested Reading

- Services Marketing Kotler & Keller
- ✤ Advertising Management S. Krishnan
- Marketing Management Kotler
- Advertisement Management Geeta Pandey

SYLLABUS

THIRD SEMESTER

PAPER I – <u>HEALTH ECONOMICS'</u>

Code <u>MHA 301</u>

Total Hours - 30

Credit- 3

To study the economics and its relation to health status

- Basics of health economics
- Nature & Scope of Managerial Economics
- ➢ Micro- and macro-economics
- Demand/Supply of Medical Care
- Concept of Cost analysis, price elasticity
- > Theory of Production
- Theory of pricing
- Price & output decision under different market condition

Suggested Reading

- Economics Samuelson
- Economics Lipsey
- Managerial Economics S. Mukherjee

PAPER II – MANAGEMENT ACCOUNTING

Code <u>MHA 302</u>

Total Hours - 30

Credit- 3

To understand the managerial accounting and its proper application

- Managerial Accounting an overview
- Nature, Scope & Purpose of managerial accounting
 - Some tools & techniques of managerial accounting
- Profitability analysis

- Receivable Management
- Working Capital

Suggested Reading

- Principles of Accounting Sharma
- Accounting for Managers Dutta

Code <u>MHA 303</u> Code <u>MHA 303</u> PAPER III - <u>PRINCIPLES OF HOSPITAL MANAGEMENT</u> <u>Credit- 3</u> <u>Total Hours - 30</u>

To introduce principles of hospital management and the functional organization of a hospital

- > Concept of Health Care Industry & its ever-changing character
- Understanding functioning of Corporate multi-specialty hospital
- Managerial activities for effective hospital functioning
- > Duties and responsibilities of Hospital Managers
- Qualities of effective Managers
- > Effective inter and intra departmental co-ordination

Suggested Reading

Code MHA 304

- Hospital Administration Tabish
- ✤ Hospital Administration S. L. Goel
- Hospital Administration Sakaharkar

PAPER IV – <u>LEGAL ASPECTS OF HEALTH</u>

Credit- 3

Total Hours - 30

Rules and regulations of international health policy.

- Medico- Legal Problems in relation to health administration
- Law of Contracts, Specific Performance
- Law applicable to Hospital employees
- Medical jurisprudence and functioning of hospitals
- Consumer Protection Act and Hospitals
- ▶ I. D. Act, W.C. Act

- West Bengal Clinical Establishment Act and Rules
- ESI Act, Trade Union Act
- Organ transplantation Act
- > PNDT Act
- International health organization / NGOs
- Medical Ethics

Suggested Reading

- Law of Consumer Universal Publications
- Law and Medical Profession Eastern Law Book Co.
- Related Acts Kamal Law Book House

PAPER V – <u>STRATEGIC MANAGEMENT</u>

Code MHA 305

Total Hours - 30

To understand strategic management in a hospital set up

- Strategic Management Process
- Situational analysis in health sector
- Strategy formulation and strategy implementation
- ➢ Forecasting methods, stakeholder analysis
- Monitoring techniques, evaluation procedures and tools

Suggested Reading

- Principles of Management L. M. Prasad
- Essential Management in Global Perspective Koontz

Code <u>MHA 306</u>

PAPER VI – <u>OPERATIONAL RESEARCH</u>

<u>Credit- 3</u>

Credit-3

<u>Total Hours – 30</u>

To understand the quantitative methods and modern management techniques as applicable in health care settings as a tool to system development and better managerial control

- > OR techniques and in applications in hospital
- Linear Programming
- Decision tree Analysis
- > Queuing theory, PERT, CPM, Assignment Model
- Management by objective
- Management by result

Suggested Reading

Code MHA 307

- Operational Research L. M. Prasad
- Operational Research P. C. Tripathy
- Management by objectives- Drucker

PAPER VII – <u>HUMAN RESOURCE DEVELOPMENT</u> <u>Credit- 3</u> Total Hours – 30

To define different rules and regulations which are necessary in a hospital and personnel management

- Rules & Regulation as applicable to Hospital employees
- > Hospital need assessment : Creation of new post & abolition of existing post
- > Job description and full utilization of manpower. Cost effectiveness
- Selection & Recruitment procedure
- ▶ Wage & Salary. Qualification, Experience, Pay fixation, E.B.
- Manpower Need Assessment and Performance Indicator Tools
- Manpower Audit in Hospital Care Industry
- > Training Need Assessment & in-service training
- Code of Conduct and disciplinary proceeding

Suggested Reading

Code MHA 308

- CDA Rules Navi Publications
- ✤ Law of Employment and Services in India Kamal Law Book House
- Fundamental Rules-Navi Publications
- Supplementary Rules- Navi pulications

PAPER VIII – <u>NUTRITION & DIETETICS</u>

Total Hours – 30

Credit- 3

To understand about human nutrition and good dietary practices

- ➢ Food & Nutrition. Role of Antioxidants
- > Overview of Metabolism & Balance Diet for patients
- Diet for Patient Selection of food, Cooking methods, Tasty Food, Food to be avoid / Added in diet, Need of complementary food.
- Steps to prevent food adulteration and Food Adulteration Act.

- > Overview of Clinical Dietetics. Quality control of Food
- Hygiene and special precautions in Hospital Kitchen
- Management of Hospital diet / Catering service
- Role of dietitian in hospital diet service

Suggested Reading

- Text Book of Social and Preventive Medicine K Park
- Preventive and Social Medicine Prabhakar Rao

PAPER IX – <u>DRUG MANAGEMENT</u>

Code <u>MHA 309</u>

<u>Total Hours – 30</u>

Credit- 3

To understand different aspects of drug management and quality control

- Drug Management ; Present scenario
- Hospital Pharmacy Licenses, Drug Licenses, Narcotics drugs
- > Purchase of drugs and other consumable materials. Drug Storage
- > Pharmacy Billing. Computerized drug management system
- Rational use of drugs and Prescription Audit
- Spurious drugs, Banned drugs
- Procedure of Drug Indenting, On time Drug dispensing
- ➤ Inventory Control ABC, VED, SDE, FSN Analysis
- Methods of ordering
 - a) Two bin system (Lead Time, Buffer stock, Reorder Level)
 - b) Cyclic System

Suggested Reading

- Materials Management Gopalakrishnan
- ✤ Matgerials Management A. C. Dutta

PAPER X -

Code MHA 310 Track Health STATISTICS AND HEALTH INFORMATION SYSTEM IN INDIA Credit- 3 Track Hummer 20

<u> Total Hours – 30</u>

To understand the various indicators of health, population dynamics, importance of health statistics in future planning for health care services and understand health information system in India

- Ratio analysis
- > Incidence and prevalence rates. Morbidity statistics
- International classification of diseases

- Health reports and Notifiable diseases
- Health information system in India
- > Health Systems Research (HSR) Introduction to WHO's concept of HSR
- ▶ Use of systems research for strengthening health systems
- ➢ Getting research into policy and practice (GRIPP)
- Developing research protocols / proposals

Suggested Reading

- Population Studies Asha Bhendre
- Eelmentary Statistics Goon, Gupta, Dasgupta
- Bio Statistics Mahajan
- Research Methorology in Social Sciences P. C. Tripathy
- Preventive & Social Medicine Rabhaka Rao

SYLLABUS

PROJECT WORK

SYLLABUS

FOURTH SEMESTER

PAPER I – <u>SYSTEM MANAGEMENT & MEDICAL TRANSCRIPTION</u> HA 401 <u>Credit- 3</u> Total Hours – 30

Code <u>MHA 401</u>

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To introduce the system concept in a hospital and different aspects of medical transcriptions

- Management as System. Open and close system
- Implication & Limitation of System approach
- > Tools of Transcription. Transcription Skill
- Ethical& Legal Responsibilities, Confidentiality
- Preparation of Miscellaneous Medical Reports
- > General Principles for complete documentation in Medical Records.

Suggested Reading

- Medical Records Geeta Sahay
- Principles of Management L. M. Prasad
- Laws related to Medical Profession Kamal Book House
- Ethical issue related to Medical Profession NIHFW, Monograph, Govt. of India

Code MHA 402 MANAGEMENT / FLOOR MANAGEMENT Code MHA 402 Credit- 3 Total Hours – 30 Total Hours – 30

To understand management of wards and OT

- > Different types of ward , Position of Nursing Station
- ▶ Ward facilities, duties and responsibilities of ward staff
- Manpower Need Assessment in Hospital Ward
- ➢ General concept on OT design and function of OT
- Advantages and importance of zoning of OT
- Advantages of Centralized OT complex

Suggested Reading

- Hospital Management Tabish
- Hospital Management Goel
- Hospital Management McGibony

Code <u>MHA 403</u> MEDICAL EQUIPMENTS & BIO – MEDICAL ENGINEERING Credit- 3 Total Hours – 30

To learn about the equipment management process and its various components and their roles in hospital system

To learn to establish equipment management procedure for a hospital

- List of common Medical Equipments used in Hospital
- > Justification of purchase proposal, Hospital Need Assessment
- Equipment selection guideline, Estimation of cost and Q.C. Planning
- Purchase / Installati8on / Commissioning of Medical Equipments
- Replacement of old equipments and Buyback Policy
- Estimation of Breakeven point and Profit Projection in hospital budget
- Medical Equipment Maintenance (In-house and AMC)
- Local, National and International availability of Medical Equipments

Suggested Reading

- Materials Management Gopalakrishnan
- NIHFW Monograph Govt. of India

PAPER IV – PATIENT CARE SERVICES

Code <u>MHA 404</u>

<u>Total Hours – 30</u>

To consider various operational aspects of important services

- Patient Admission / Discharge
- > All patients related services and assistance. Good communication.
- Nursing care with full devotion / commitment
- Diagnostics Services
- Blood transfusion services
- Housekeeping services
- Cafeteria and Dietary services
- > Proper and respectful disposal of deceased person.

Suggested Reading

- Hospital Administration Tabish
- Hospital Administration Goel
- Hospital Administration McGibony

PAPER V – <u>HEALTH INSURANCE</u>

Code <u>MHA 405</u>

<u>Total Hours – 30</u>

Credit- 3

Credit-3

To familiarize with concept of health insurance, its scope and applicability

- ➢ Health Insurance in Private Health Sector
- > Health Insurance in developing and developed countries
- Different Health Insurance Policies Analysis and Management
- Concept of combined Life Insurance and Health Insurance
- ► GOI & State Govt. Policy in implementation of Health insurance
- Hospitals / TPA / Insurance Company / Relationship and Problems.

Suggested Reading

- Insurance Management Dave
- National Insurance Monographs on Insurance Management
- IRDA Guidelines on Health Insurance Govt. of India

PAPER VI – <u>DISASTER MANAGEMENT</u>

Code <u>MHA 406</u>

<u>Total Hours – 30</u>

Definition of disaster-To learn to identify and assess disasters in the community. To set forth policies and procedures for disaster preparedness and to prepare a disaster plan for a hospital

- Basics of disaster management and Mass casualties
- Components of disaster plan : pre-hospital and hospital

- Disaster alertness in Hospital
- Disaster management planning and implementation
- > Severity of illness amongst disaster victims and risk assessment
- Mock exercise on disaster management in Hospital

Suggested Reading

- Quality Management Janakiraman & Gopal
- Total Quality Management BIS Monographs

PAPER VII – <u>QUALITY MANAGEMENT</u>

Credit- 3

Code <u>MHA 407</u>

<u>Total Hours – 30</u>

To understand the concept of quality and its relation to health care scenario, its importance as regards patient satisfaction and marketing of services provided

- Quality Management Programme, ISO clauses, quality manual, quality of clinical services, Critical Pathways, Medical Audits, NABL, NABH, JCI, BIS
- Performance review Assessment / Methods
- Quality Management of diagnostic facilities
- > Quality of assurance procedures, Deming's Principles, Juran Trilogy, Kaizen, Philip Crosby's Principles
- Management of Social Services. Assessment of Client satisfaction
- Quality Circle of India

Suggested Reading

Code <u>MHA 408</u>

- Total Quality Management Aswathappa Himalaya Books House
- Quality Management Barnett Pitman Publishing
- ✤ Quality Management P. C. Tripathy

PAPER VIII – <u>NURSING ADMINISTRATION</u>

Credit- 3

<u> Total Hours – 30</u>

To study the role of nursing administration in health care delivery

- Introduction to Noble Nursing Profession
- Nursing organization structure
- Nurses Doctors and Nurses Patients' relationship
- Nurses : A dedicated social and professional entity
- > Staffing norms in various types of hospitals and departments
- Recent trends in nursing profession and education
- Specialization in nursing practices

Suggested Reading

- ♦ Ward Administration and Management N. R. Brothers
- Hospital Administration and Planning Paras, Hyderabad
- Nursing Administration Jhora Medical Pub, Mumbai

PAPER IX- HOSPITAL PLANNING

Code MHA 409

<u>Total Hours – 30</u>

Credit- 3

To understand all aspects of planning and commissioning of different types of hospital including specialty hospitals and project management

- > Changing health care concept in planning / designing.
- Site surveys for planning a hospital (Techno-Commercial)
- > Hospital building, architectural patterns, landscaping
- > Internal arrangements, sanitation, lighting, ventilation and traffic control
- Planning of 30,100,250 bedded hospital(general/specialty)
- Planning of 500, 750 and above bedded hospital(teaching/super-specialty/non-teaching specialty hospitals)
- > Project cost and total budget : Feasibility and viability study of Hospital
- > Project conceptualization, functional requirements. Implementation.

Suggested Reading

- Principles of Hospital Administration Tabish
- Principles of Hospital Administration M C Gibony
- NIHFW Monographs Govt. of India, New Delhi

PAPER X- HOSPITALITY MANAGEMENT

Total Hours - 30

Credit- 3

Code <u>MHA 410</u>

To visualize into the future the needs and expectation of the community from the hospitals

- > Treat your patients and treat also like your guest
- > Changing mind set of patients necessitate Hospitality Management
- > Aims and objectives of Hospatility Management (Commercial point)
- > Methods of Hospitality Management in a Hospital set-up
- > Attractive look, Effective conversation, Multi lingual, Smart dress.
- Role of Hospatality Management in a Hospital set-up

Etiquette and manners

Suggested Reading

Hospital Administration - S. L. Goel

PRACTICAL TRAINING

First Semester		Second Semester	<u>.</u>	
11.1	E D P / I T Department	22.1	Laborat	ory Services
11.2	Reception	22.2	Imaging	g Services
11.3	Registration		22.3	Personnel / H R Dept.
11.4	Admission		22.4	Laundry & Linen Services
11.5	Billing & Discharge		22.5	Kitchen & Dietary Services
11.6	OPD Services		22.6	Marketing
11.7	Public Relation Office		22.7	Computerized Medical Record
11.8	Pharmacy Services		22.8	Security Services
11.9	Stores		22.9	Transportation Services
11.10	House Keeping	22.10	Wards	
11.7 11.8 11.9	Public Relation Office Pharmacy Services Stores	22.10	22.7 22.8 22.9	Computerized Medical Record Security Services

Third Semester

Fourth Semester

33.1	Central Sterile Supply Dept.		44.1	Maintenance Department
33.2	Library in Hospital		44.2	Bio-Medical Department
33.3	Emergency		44.3	Diagnostic Imaging
33.4	Critical Care Unit	44.4	Dental Service	
33.5	Medical Record	44.5	Dialysis Unit	
33.6	Operation Theatre		44.6	Burn Units
			44.7	Blood Bank
			44.8	Mortuary
			44.9	Telemedicine
			44.10	Medical transcription

First Semester

11.1 <u>E D P / I T Department</u>

Participation in the process of:-

- 1) Lay out of EDP / IT Department
 - a) Server Room
 - b) EDP Lab.
 - c) Manager's Office
 - d) Hardware Engineer
 - e) Software Engineer / Programmer
 - f) Data Entry Operator
- 2) Different sections for data entry
- 3) Data collection
- 4) Data analysis
- 5) Dissemination of information
- 6) Storing and preservation of information / record
- 7) Optimum utilization of LAN / WAN / MAN system
- 8) Different modules used in EDP through ERP system like;

- Registration, OPD, Admission, Discharge, Billing, Emergency, Laboratory, Nursing Station, Operation Theatre, Stores, Pharmacy, Pay-roll, different modules of Oracle and Envision system, Management Information System.

- 9) Maintenance of Computer including its accessories
- 10) Updating of modules on need based
- 11) Application of antivirus system

11.2 <u>Reception</u>

Participation in the process of:-

- 1) Receiving patients and providing information
- 2) Providing information of availability of doctors
- 3) Fixing appointment with doctors
- 4) Arrangement of direct admission for urgent cases
- 5) Public Address System
- 6) Supervising internal transportation system
- 7) No. of Receptionist required to handle the Desk

11.3 <u>Registration</u>

Participation in the process of:-

- 1) Infrastructure Lay out, Physical facilities,
- 2) Patient registration
- 3) Assisting in collection of hospital charges
- 4) Transmitting information to respective doctor
- 5) Assisting in sending patient to the respective departments
- 6) Computer based functional activity by Receptionist

11.4 <u>Admission</u>

Involvement in the process of:-

- 1) Documentation of registration for Admission of patients
- 2) Preparation of files with relevant papers
- 3) Observing the process of receiving advance payment during admission either by cash or credit card
- 4) Formalities of procedures for ensuring availability of payee's fund
- 5) Distribution of visiting card, literatures, brochure etc. to the client
- 6) Transfer of Patient to ward

- 7) Ambulance management and billing
- 8) Deployment of no. of Receptionist-cum-Office Assistant
- 9) Foreign Exchange facilities

11.5 <u>Billing & Discharge</u>

Involvement in the process of:-

- 1) Assimilation of information through LAN from the different departments
- 2) Checking of data in the computer
- 3) Observation of different billing system like;
 - a) Cash Billing As per hospital's prevailing rate schedule
 - b) TPA Billing As per hospital's prevailing rate schedule
 - c) Copt. Billing Tailor-made billing as per agreement
 - Handing over the bill to the patient party
- 5) Providing Birth Certificate, Amputed Certificate, Death Certificate, Referral Letter, as and when required
- 6) Providing discharge certificate in original along with all relevant documents for cash payee patient and photo copy of discharge certificate to the corporate and TPA patients
- 7) Deployment of no. of Receptionist-cum-Office Assistant
- 8) Facilities Computer, Swapping Machine, Note Counting Machine, Communication facility

11.6 OPD Services

Involvement in :-

4)

- 1) Layout of Reception Desk in OPD
- 1) Registration and department wise OPD Card segregation
- 2) Location of the concerned Department
- 3) Reception of patients
- 4) Physical facilities in OPDs
- 5) Close supervision of Doctor's Chamber for the followings:-
- Availability of
 - a) Prescription Pad,
 - b) Stethoscope
 - c) View Box,
 - d) Bed Trolley
 - e) Weigh Machine
 - f) Torch Light
 - g) Gloves
 - h) Liquid soap and towel
- 5) Records maintenance of OPD
- 6) Supervision of patient waiting area and its seating arrangement
- 7) Adequate communication with other departments / units / wards etc.
- 8) Public Addressing System
- 9) Deployment of Staff like Jr. Doctor, Para Medical Staff, Receptionist, Assistant etc.

11.7 <u>Public Relations Office</u>

(a) <u>General</u>

Helping patients regarding the followings:

- 1) Information Over phone / e-mail / letter / fax / across the table
- 2) Dispatch reports for outstation patients
- 3) Providing different types of brochure
- 4) Liaison between doctor and patient

- 5) Appointment for doctors
- 6) Estimation of treatment expenditure
- 7) Billing status of IPD patient
- 8) Visiting indoor patients to enquire about their facilities
- 9) Availability of Public Relations Officer everyday including Sundays and holidays

(b) <u>Corporate</u>

- 1) Coordination of admission of company patients and patient having medical insurance for cashless treatment.
- 2) Ensuring validity of ID card and referral letter
- 3) Filling up the pre-authorization letter and facsimile the patient case history, investigation report, clinical notes etc. to the concerned TPA for verification and approval.
- 4) Provide different additional queries regarding the health status and treatment procedure of the patients to concerned TPA.
- 5) Informing the admission counter about the status of the patient awaiting admission.
- 6) Close liaison with concerned department or doctor of Corporate Houses
- 7) Coordination with Billing and other Depts. for collection of paper documentation

11.8 Pharmacy Services

Involvement in:-

- 1) Space requirement as per act
- 2) Lay out
- 3) Storage facility different set up for different type of drugs
- 4) Equipments
- 5) Organizational structure (role and function)
 - a) In-charge
 - b) Pharmacist and Chemist
 - c) Sales Technician
 - d) Cash Counter
 - e) Computer Operator / Office Assistant
 - f) Attendant
- 6) Purchase of drugs disposables, consumables etc.
- 7) Purchase of food items
- 8) Quality control
- 1) Proper storage of drugs
- 10) Sales policy
- 11) Record maintenance
- 12) Preparation of Accounts
- 13) Pharmacy Audit

11.9 <u>Stores</u>

Observation and participation in:-

Different stores like Medical Stores, Linen Stores, Housekeeping Store, Maintenance Store, Printing & Stationary Store etc.

- 1) Space requirement
- 2) Lay out (as per category of store)
- 3) Storage facility, proper set up for particular type of medical and non-medical items
- 4) Issuance policy
- 5) Safety measure
- 6) Practical application of E O Q
- 7) Minimum stock level
- 8) Deployment of staff like;

- a) In-charge
- b) Store keeper
- c) Record maintenance clerk
- d) Attendant / Delivery person
- e) Security etc.
- Proper storage procedures
- 10) Indents
- 11) Issue of item as per indent
- 12) Record keeping of issued materials as well as balance stock
- 13) Delivery system
- 14) Physical verification of stored items periodically

11.10 House Keeping

Observation of:-

9)

- 1) All departments, wards and adjacent areas within the hospital premises
- 2) Cleaning process Moping, Sweeping, Washing, Shampooing (Carpet), Brooming
- 3) Process of selection of detergents and disinfectants
- 4) Disposal of waste materials
- 5) Sources of waste in different areas of hospital
- 6) Categories of waste identification in the hospital
- 7) Waste segregation according to Biomedical Waste Management & Handling Rules
- 8) Application of colour code, including poly pack, bin etc.
- 9) Waste transportation process
- 10) Internal waste storage system
- 11) Disposal process of biomedical waste (solid & liquid)
- 12) Management of infected healthcare worker
- 13) Use of Personnel Protective Equipment (PPE)
- 14) Supervision / leadership style
- 15) Staff training for precaution taken
- 16) Pest control system
- 17) Record maintenance
- 18) Waste Tracking
- 19) Equipment for wet and dry scrubbing machine
- 20) Usage of vacuum cleaner
- 21) Garbage Trolley
- 22) Roll of
 - (a) Operation Manager,
 - (b) Housekeeping Manager,
 - (c) Supervisor (round the clock) in different shift
 - (d) Sweeper
 - (e) Ward boy

Second Semester

22.1 Laboratory Services

Observation of:-

- 1) Location
- 2) Structural facility
- 3) Administrative Area
- 4) Laboratory equipment
- 5) Lighting in laboratory

- 6) Laboratory furniture
- 7) Special mechanical and electrical equipments
- 8) Various functional units
 - a) Clinical pathology
 - b) Hematology
 - c) Bio Chemistry
 - d) Histology
 - e) Bacteriology and Serology
 - Auxiliary service area
- 10) Collection of samples and delivery of reports
- 11) Requirements for various quality accreditation systems
- 12) Organization
 - a) Sr. Microbiologist
 - b) Microbiologist
 - c) Lab. In-charge
 - d) Technician
 - e) Research Fellow
 - f) Computer Operator
 - g) Attendant

22.2 Imaging Services

Observation of:-

9)

- 1) Layout of X-ray rooms
- 2) Various types of imaging machines and its usages
- 3) Maintenance of imaging machines
- 4) Protective gears
- 5) Precaution taken for Hazardous radio activity
- 6) Licenses required
- 7) General and special investigations
- 8) Layout of Reception area
- 9) Dress changing area of patient
- 9) Film processing room
- 10) Analysis of developed film and preparation of report
- 10) Storing of developed film
- 11) Delivery of film to patient / ward
- 12) Roll of Radiologist, Technicians, and Office Assistant of Radiology Dept.

22.3 <u>Personnel / H. R.Department</u>

Observation of:-

- a) Present employee status
- b) Selection and recruitment procedure
- c) Employee appraisal system
- d) Employee training and development system
- e) Retirement and retirement benefit system
- f) H. R. Audit
- g) Wage Administration

22.4 Laundry & Linen Services

Observation of

- 1) Location
- 2) Work flow
- 3) Physical facilities of Laundry
 - a) Receiving, Storing, Sorting, washing area

- b) Central Disinfection Area
- c) Cleaned Linen processing room
- d) Laundry Manager's Office
- e) Staff Room
- f) Sewing and inspection area
- g) Supply storage room
- h) Solution Preparation area
- i) Cleaned Linen issue area
- j) Natural ventilation and light
- k) Free Linen movement area
- 4) Other facilities
 - a) Adequate Water supply
 - b) Drainage system
 - c) Adjacent power supply
 - d) Steam
 - e) Compressed air
- 5) Arrangement of equipments
- 6) Soiled linen receiving from ward, OT, other areas
- 7) Process of sorting and cleaning, washing, drying, ironing
- 8) Collection and storing process of cleaned linen
- 9) Sorting of discarded linen and sending them to the Store
- 10) Process of linen distribution
- 11) Maintenance of hygiene
- 12) Infection control process
- 13) Process of staff training
- 14) Process of co-ordination among the related departments
- 15) Manpower for Laundry
 - (a) Laundry Manager
 - (b) Supervisor
 - (c) Supporting staff

22.5 Kitchen & Dietary Services

- 1) Overview of kitchen lay out and its adjacent areas
- 2) Physical facilities
 - a) Receiving area
 - b) Washing area
 - c) Preparation area
 - d) Cooking area
 - e) Storing area
 - f) Food Distribution area
 - g) Garbage disposal area
 - h) Office of Kitchen Manager
 - i) Office Kitchen Staff
- 3) Work Flow
- 4) Patient visit and observation of the diet chart preparation
- 5) Observation and process of :
 - i) Coordination with Dietitian before preparing process of food for patient
 - ii) Receiving and storage of perishable and non-perishable food
 - iii) Process of calculation the quantity of perishable & non-perishable items to be cooked
 - iv) Washing, cutting, preparation and cooking process
 - v) Storage of cooked food and precaution to be taken
 - vi) Delivery process of hot food (Hot Trolley) to patient according to diet chart
 - vii) Process of distribution of food in the cafeteria and dining hall
 - viii) Maintenance of hygiene by kitchen staff
 - ix) Safety measure

- x) Receiving of soiled utensils and left over food
- xi) Collection of utensils and washing process
- xii) Garbage disposal system
- xiii) Maintenance of Accounts
- xiv) Pest control system
- xv) Process of supervision and leadership style
- xvi) Educational programme, research, dietary counseling etc.
- xvii) Periodical audit
- 6. Organization
 - i) Qualified Kitchen Manager
 - ii) Dietitian
 - iii) Head Cook, Cook, Stuart, Masalchi, Helping Staff

22.6 <u>Marketing</u>

Observation / involvement in:-

- 1) Office Lay out
- 2) Different types of advertisement for projection
- 3) Fixture required for marketing
 - (a) Banner
 - (b) Leaflet
 - (c) Hoarding
 - (d) CD / VCD / DVD
- 4) Media Management (Print, Electronic)
- 5) Event Management (Camp, Seminar, CME)
- 6) Institutional / Corporate marketing
- 7) Direct marketing
- 8) Channel / Franchise marketing
- 9) Data analysis
- 10) Patient feed back
- 11) Organization
 - a) Head of Marketing
 - b) Departmental Manager
 - c) Regional and Territory Manager
 - d) Marketing Executive
 - e) Office Assistant

22.7 Computerization of Medical Record

Observation / involvement in

All elements of physical records maintenance plus

- 1) Alphanumerical data
- 2) Machine generated data
- 3) Image data
- 4) Interpretation of data
- 5) Derived data
- 6) Storage process of electronic data
- 7) Data classification
- 8) ICD 10 System and its use in electronic records maintenance system.

22.8 <u>Security Services</u>

Observation of:-

- Security room and posts 1)
- 2) Security services in the hospital
- Role of Security during patient visiting hours 3)
- Traffic control inside the hospital 4)
- Maintenance of fire precautions 5)
- Process of medico legal activities 6)

22.9 **Transportation Services**

Observation of:

- Different internal and external transport a)
- b) Different ambulances
- c) Ambulances enmarked for communicable disease
- d) Facilities given in the emergency ambulance
- Maintenance of ambulance e)
- f) Maintenance of internal transportation

22.10 Wards

Observation of:-

- Ward Composition **Beds Patient Ratio** 1) _
- 1) Lay out

- 3) Types of ward 4)
 - Physical facilities
 - a) Nursing Station
 - b) Doctor's room
 - c) Dirty utility room
 - d) Dress Changing room
 - e) Sanitary facilities
 - f) Dressing room for minor treatment
 - g) Isolation room
 - h) Ward Pantry
 - i) Day room
 - j) Barrier Nursing
 - k) Other facilities
 - Ward side Laboratory i)
 - ii) Linen Store
 - Drug Store etc. iii)
- Other Equipment facilities 5)
 - Electronic Monitoring Devices a)
 - Ventilation Devices Natural & Mechanical b)
 - Ward Lighting c)
 - Calling Bell d)
 - Fire Alarm System e)
- 6) Organization
 - a) Resident Medical Officer
 - b) Nursing Superintendent
 - Floor Co-coordinator c)
 - Nursing In-charge d)
 - Nursing Personnel e)
 - Nursing Trainee f)
 - Ward Bov g)
- 7) Communication facilities
- 8) Methods of patients' record keeping in wards / technical / medical details

- 9) Admission and Discharge procedures
- 10) Billing system / generation of bills based on bed head ticket entry
- 11) Cleanliness
- 12) Duty arrangement of various medical and para medical staff

Third Semester

33.1 <u>Central Sterile Supply Department (CSSD)</u>

Observation of

- 1) Location
- 2) Name and function of equipments
- 3) Items processed by Central Sterile Supply Department
- 4) Sterilization technique
 - a) Heat
 - b) Gas
 - c) Liquid
 - d) Ionizing radiation
 - e) Others
- 5) Work flow
- 6) Clean zone, dirty zone
- 7) Pooling of materials, equipments
- 8) Function of different equipments used for sterilization
- 9) Process of receiving and distribution of materials
- 10) Technique of Gauge folding
- 11) Cleaning, drying and packing of sterilized materials
- 12) Segregation of Dirty zone and clean zone
- 13) Process of receiving and distribution of materials
- 14) Quality control checking of sterilization in collaboration with Micro-biology Lab.
- 15) Organization
 - a) CSSD Supervisor
 - b) Technologist
 - c) Technical Assistant
 - d) Para medical staff
 - e) Attendant
- 16) CSSD Committee

33.2 Library in Hospital

Observation the functioning of :-

- 1) Library work flow
- 2) Physical facilities
- 3) Procurement of books and journals as per Good Office Committee (GOC) norms
- 6) Receiving the purchased books / periodicals, audio visual journals etc.
- 7) Preservation of books in the Shelves
- 8) Catalogue preparation
- 9) process of issue and collection of books
- 10) Updating of catalogue annually
- 11) Library rules and regulations
- 12) Preparation of Membership Card
- 13) Repair of damaged books
- 14) Ascertaining of lost books and journals

- 15) Arrangement of educational programme through Video Satellite system
- 16) Stock verification of Library items periodically

33.3 Emergency

Observation of:-

- Location of Emergency in hospital 1) 2)
 - Basic lay out of Emergency
 - **Receiving patients** (a)
 - Patient examination zone (b)
 - (c)Patient investigation zone
 - (d) Procedure room
 - Cardio Pulmonary Resuscitation Unit (d)
 - Dead patient barrier (e)
 - (f) EMO's Office
 - Nursing Station (g)
- 3) Infrastructural facilities
 - Office of EMO a)
 - Nursing Office b)
- 4) Equipments
- 5) Legal procedure system
- **Emergency Operation Theatre** 6)
 - Arrangement of instruments and oxygen for minor Operation (a)
 - (b) Sterilization and fumigation of O.T. Room
- 7) Admission procedure
- Billing for day care procedure in Emergency Dept. 8)
- 8) Staffing
 - i) Medical
 - ii) Para Medical
- 9) Security
- 33.4 **Critical Care Unit**

Observation / involvement in:-

Physical structure and facilities

- Organizational structure 1)
- 2) Bed orientation pattern
- 3) Lighting system
- Monitoring system including connection to centralized monitoring system 4)
 - Invasive (a)
 - (i) Central Venus Pressure (CVP)
 - Arterial Blood Pressure monitoring (ii)
 - Cardiac output monitoring (iii)
 - Pulmonary Arterial monitoring (iv)
 - (b) Non-invasive
 - Heart bit rate (i)
 - (ii) **Blood Pressure**
 - (iii) Respiratory rate
 - Intake & output monitoring (iv)
- Maintenance of sterility and general cleanliness
 - Maintenance of sterility of the ward 1)
 - 2) Maintenance of sterility of clothing used in CCU
 - General sterilizing procedures before examination of the patient 3)
- Administration of CCU
 - Qualified doctor having experience in CCU (as per WHO ratio) 1)

- 2) Qualified nurse having experience in CCU (as per WHO ratio)
- 3) Deployment of qualified paramedical staff as per WHO ratio)

Workflow

- 1) In flow of patient
- 2) Type of patients commonly admitted in CCU
- 3) Pattern of treatment patient receive in CCU
- 4) Type of patient actually needs life saving support
- 5) Out flow of patient
- 6) Counseling with outside visitors / patient party
- Equipment maintained in CCU
 - 1) Monitor
 - 2) Ventilator
 - 3) Defibrillator
 - 4) ECG and other equipments used in CCU

Equipment maintained in specialized CCU

- 1) Intra Aortic Balloon Pump
- 2) Photo Therapy Machine

Maintenance of uninterrupted gas and power supply system and their utilization

- 1) Continuous wall flow oxygen
- 2) Compressed air
- 3) Suction Apparatus (Vacuum Pump)
- 4) Uninterrupted Power Supply (UPS) line

33.5 <u>Medical Records</u>

Observation / involvement in:-

- a) Assembly of records
- b) Quantitative and qualitative analysis
- c) Different classification of records
- d) Methods of deficiency check
- e) Completion of incomplete records
- f) Retrieval of medical records
- g) Coding system
- h) Indexing system
- i) Generation of statistics and analysis
- j) Reporting to various statutory authorities
- k) Methods of numbering
 - i) Serial number
 - ii) Unit number system
 - iii) Serial unit numbering
- l) Filing System
 - i) Decentralized system
 - ii) Centralized system
 - iii) Various other methods
- m) Types of forms

33.6 **Operation Theatre**

Observation / involvement in:-

- 1) Location
- 2) Zoning of Operation Theatre

- 3) Infrastructural facilities
- 4) Centralized and decentralized Operation Theatres
- 5) Equipment requirement
- 6) Procurement and maintenance including annual maintenance contract
- 7) Functions and policies of Operation Theatres
- 8) Manpower requirement
 - a) Medical Superintendent
 - b) In-charge
 - c) Anaesthetist
 - c) Nursing personnel
 - d) Technician
 - e) Ward Boy
- 9) Duties and responsibilities including standard operation procedures
- 10) Safety procedures
- 11) Methods of checking operating rooms for readiness to receive patient
- 12) Periodical sterilization / fumigation
- 13) Sterile supply
- 14) Equipments procurement and maintenance

Fourth Semester

44.1 <u>Maintenance Department</u>

Observation of

- a) Location of different maintenance department
- b) Lay out
- c) Power Generation and supply
- d) Water Treatment Plant and distribution system
- e) Demineralization Plant with R.O. facility for Dialysis unit
- f) Oxygen Plant
- g) Effluent Treatment Plant
- h) Air Condition Plant and distribution system
- i) Maintenance of the medical equipments, calibration
- j) Maintenance of total hospital building civil, electrical and mechanical
- k) Organization
 - a) Chief Engineer
 - b) Engineer (Civil, Electrical, Mechanical)
 - c) Supervisor (Electrical, Mechanical, Civil)
 - d) Technician
 - e) Helper
 - f) Office Assistant

44. 2 Bio-Medical Department

- 1) Bio Medical equipment and their function
- 2) Observation of Bio-Medical Equipments
- 3) Knowing the name of the Bio-Medical Equipments
- 4) Importance and fundamental functions of Bio-Medical Equipments
- 5) Maintenance procedures of Bio-Medical Equipments
- 6) Need assessment and procurement procedure
- 7) Periodical audit of Bio Medical Equipment
- 8) AMC of Bio Medical Equipments

44.3 Diagnostic Imaging

Observation / involvement in:-

- 1) Various types of machines like;
 - a) CT
 - b) MRI
 - c) PET
 - d) USG with color Doppler
- 2) Advantages / disadvantages of different types of machine
- 3) Basic functioning and maintenance
- 4) Special licensing requirement
- 5) Special structural requirements
- 6) Staffing and manpower planning
- 7) Cost analysis and profitability
- 8) Operation and maintenance

44.4 Dental Services

Observation / involvement in :-

- a) Location
- c) Laboratory
- d) Recovery Room
- e) Waiting Room
- f) Storage
- g) Administrative Office
- h) Floors / Walls / Ceiling
- i) Lighting
- j) Plumbing
- k) Ventilation
- 1) Equipment and maintenance of equipments

44. 5 <u>Dialysis Unit</u>

Observation / involvement in:-

- 1. Location
- 2. Infrastructural facility
 - a) Infrastructure for day care dialysis or out patient dialysis
 - b) Infrastructure for inpatient dialysis
- 3. Various types of dialysis units
- 4. Special arrangement for maintaining sterility
- 5. Ambulatory dialysis system
- 6. Procurement, installation and maintenance of various types of dialysis machines
- 7. Arrangement for stand-by unit
- 44. 6 <u>Burn Unit</u>

Observation / involvement in :-

- 1. Location
- 2. Infrastructural facility
- 3. Special equipment requirement for Burn Unit
- 4. Attached Laboratory facility
- 5. Communication facility
- 6. Maintenance of Asepsis

- 7. Manpower requirement of
 - a) Medical
 - b) Para Medical
 - c) General Staff
- 8. Mechanism for specialized training need assessment

44.7 <u>Blood Bank</u>

Observation / involvement in :-

- 1) Location
- 2) Reception
- 3) Special arrangements for voluntary doners
- 4) Administrative Office
- 5) Record Keeping
- 6) Servicing rooms
- 7) Bleeding Room
- 8) Storage Room
- 9) Storage equipment
- 10) Regulatory requirement
- 11) Blood safety procedures
- 12) Receive and delivery of blood
- 13) Triple screening and check method
- 14) Record keeping
- 15) Medico-legal aspects
- 16) Physical facilities
- 17) Waiting facilities
- 18) Laboratory facilities
- 19) Other facilities
- 20) Issuance of Blood Donor Card
- 21) Safety devices
- 22) Liquid waste management
- 23) Procedure for discarding
- 24) Staffing
 - a) Medical Officer
 - b) Paramedical Staff
 - c) Non-medical Staff

44.8 <u>Mortuary</u>

Observation / involvement in :-

- 1) Location
- 2) Physical facilities
- 3) Body refrigerator
- 4) Walk in refrigerator
- 5) Capacity decision of Mortuary
- 6) Autopsy facility
- 7) Requirement for autopsy room
- 8) Preservation / identification/leveling of viscera / body fluids and other materials for medicolegal purposes
- 9) Embalming procedures
- 10) Methods of long distance transport of dead bodies
- 11) Arrangements for religious rides
- 12) Mortuary traffic control
 - a) Internal
 - b) External
- 13) Identification of bodies using triple check system
- 14) Maintenance of records

- 15) Various legal requirements
- 16) Disposal of unclaimed bodies
- 17) various religious rites

44.9 <u>Telemedicine</u>

- 1. Infrastructure both end (1) Hospital end (2) Nodal Centre
- 2. Requirement

3.

- a) Computer Monitors
- b) Cameras
- c) Internet connection
- Observation of telemedicine techniques and taking part in the process
- 4. Manpower requirement
 - a) Medical Officer
 - b) Technician

44.10 Medical Transcription

- 1. Observation of techniques and taking part in the process
- 2. Infrastructural requirement
- 3. Trained manpower
- 4. Transmission modes