OBM 752 — HOSPITAL MANAGEMENT

Anna University | Regulations 2017 | Sem VII

★ COMPLETE EXAM STUDY GUIDE ★

All 5 Units Covered	**2-Mark Q&A + 16-Mark Q&A**
Previous Year Questions (2020–2024)	**Easy Short-Note Format**
High Priority ★★★ Topics Marked	**Quick Revision Ready**

Sub Code: OBM752 | Max Marks: 100 | Time: 3 Hrs
Part A (10×2=20) | Part B (5×13=65) | Part C (1×15=15)

UNIT I — OVERVIEW OF HOSPITAL ADMINISTRATION

2-MARK QUESTIONS & ANSWERS

Q1. What is equipment planning in hospitals?
- ➤ Process of selecting, procuring, installing & maintaining medical/non-medical equipment.
- ➤ Covers technical specs, budget, commissioning phases & service scheduling.

Q2. Why is functional planning important?
- ➤ Ensures efficient workflow between hospital departments/zones.
- ➤ Minimizes patient/staff movement, reduces infection risk, improves service delivery.

Q3. What are the technical aspects of equipment planning?
- ➤ Electrical load, plumbing needs, ventilation, structural support, safety regulations.
- ➤ Also includes vendor selection, warranty, spare parts availability.

Q4. What is the distinction between hospital and industry?
- ➤ Hospital: service-oriented, 24/7, life-critical, non-profit goal, intangible output.
- ➤ Industry: product-oriented, profit-driven, tangible output, fixed working hours.

Q5. What is succession planning?
- ➤ Process of identifying & preparing future leaders to fill key positions.
- ➤ Ensures leadership continuity in hospital management.

Q6. What is hospital planning?
- ➤ Systematic process to design hospital facilities for optimal patient care.
- ➤ Covers site selection, bed norms, functional zones, equipment & staffing.

Q7. What are the challenges in hospital administration?
- ➤ Managing diverse workforce, cost control, quality care, legal issues, technology updates.
- ➤ 24/7 operations, infection control, patient satisfaction, government regulations.

Q8. What are the norms for bed planning?
- ➤ General hospital: 3-5 beds per 1000 population.
- ➤ ICU: 5-10% of total beds; Private: 20-25%; General ward: 60-70%.

16-MARK QUESTIONS & ANSWERS

Year	Question Asked
ND2020	Discuss hospital planning and functional planning in detail
ND2021	Explain challenges in hospital administration / Difference hospital vs industry
AM2022	Challenges to hospital administration / Distinction hospital vs industry
ND2022	Functions of hospitals + six sigma / Difference hospital & organizations
ND2023	Challenges faced by hospital administrators / Distinction hospital & industry
AM2024	Equipment planning – purchase, installation, maintenance / Rural hospital design
ND2024	Hospital planning norms / Equipment commissioning phases

Q1. Distinction between Hospital and Industry [★★★]

Definition:

• Hospital: An institution providing medical, surgical & nursing care. Industry: Commercial enterprise producing goods/services for profit.

Key Differences (Table Format):

- PURPOSE: Hospital → Patient care & service | Industry → Profit & production
- OUTPUT: Hospital → Intangible (health) | Industry → Tangible (products)
- WORKING HOURS: Hospital → 24×7×365 | Industry → Fixed shifts
- STAFF: Hospital → Multi-disciplinary (doctors, nurses, technicians) | Industry → Skilled workers
- MEASUREMENT: Hospital → Patient outcomes | Industry → Profit/Loss
- ETHICS: Hospital → Strict medical ethics | Industry → Business ethics
- CUSTOMERS: Hospital → Patients (helpless, vulnerable) | Industry → Customers (choice)
- INVENTORY: Hospital → Life-saving drugs/equipment | Industry → Raw materials/finished goods
- REGULATION: Hospital → NABH, MCI, Govt. | Industry → ISO, BIS, FSSAI
- ACCOUNTABILITY: Hospital → Higher (life & death) | Industry → Lower

Administrative Challenges due to this distinction:

- Cannot 'close' hospital during losses — service must continue
- Staff motivation harder — high stress, emotional burnout
- Quality control more complex — every patient unique
- Legal accountability is very high for hospital

Q2. Challenges in Hospital Administration [★★★]

1. Managing Diverse Workforce:

- Doctors, nurses, technicians, admin staff — all need different management approaches.

2. 24×7 Operations:

- Hospital never closes — needs round-the-clock staffing, maintenance & supplies.

3. Cost Management:

- High cost of equipment, drugs, utilities vs. need to provide affordable care.

4. Quality & Patient Safety:

- Zero tolerance for errors — life is at stake; requires strict protocols (NABH standards).

5. Legal & Ethical Issues:

- Medical negligence, consent, confidentiality, RTI — hospital administrators face legal risks.

6. Technology Upgradation:

- Rapid changes in medical technology require constant investment & staff retraining.

7. Infection Control:

- Nosocomial infections (hospital-acquired) — need strict sterilization & hygiene protocols.

8. Community Relations:

- Handling patient grievances, media, NGOs, government inspections.

9. Staff Retention:

- High attrition in healthcare — need good HR policies, training, incentives.

Six Sigma in Hospital Administration:

- DMAIC: Define → Measure → Analyze → Improve → Control
- Used to reduce medication errors, waiting time, billing errors.
- Goal: < 3.4 defects per million opportunities.

Q3. Hospital Planning — Steps & Architect's Role [★★★]

Definition: Hospital planning = systematic process to design & build a hospital optimally.

Steps in Hospital Planning:

- 1. Pre-planning: Need assessment, feasibility study, site selection.
- 2. Functional Planning: Define departments, patient flow, functional zones.
- 3. Master Plan: Layout of buildings, roads, parking, utilities.
- 4. Detailed Design: Architectural drawings, structural plans.
- 5. Equipment Planning: Identify, procure, install medical equipment.
- 6. Construction & Commissioning: Build and test all systems.
- 7. Staffing & Operations: Recruit staff, set SOPs, start services.

Role of Hospital Architect:

- Translates medical needs into physical design.
- Ensures infection control through proper ventilation, traffic flow.

- Plans fire safety, accessibility (ramps, elevators).
- Coordinates with medical planners for department layout.

Bed Planning Norms:

- General ward: 60–70% | Private/semi-private: 20–25%
- ICU: 5–10% of total beds
- National norm: 3–5 beds per 1000 population
- 500-bed hospital: ~50 ICU beds, ~350 general, ~100 private

Q4. Equipment Planning in Hospitals [★★★]

Definition: Systematic process of identifying, selecting, procuring, installing & maintaining hospital equipment.

Technical Aspects:

- Electrical requirements (voltage, load, UPS backup)
- Plumbing & water supply needs
- Structural load bearing capacity
- Ventilation & air conditioning requirements
- Radiation shielding (for X-ray, MRI rooms)

Phases of Commissioning:

- Phase 1 – Planning: List equipment needed, get specifications.
- Phase 2 – Procurement: Tender, vendor selection, purchase.
- Phase 3 – Installation: Physical setup, civil works if needed.
- Phase 4 – Testing & Calibration: Check accuracy & safety.
- Phase 5 – Training: Train staff on equipment operation.
- Phase 6 – Handover: Formal acceptance & documentation.

Methods of Scheduling Equipment Services:

- Preventive Maintenance (PM): Regular scheduled servicing.
- Breakdown Maintenance (BM): Repair when faulty.
- Annual Maintenance Contract (AMC): Vendor handles all maintenance.
- Planned Maintenance: Combination of PM + BM based on usage.

■ EXAM TIP: Hospital vs Industry table + challenges + bed norms appear EVERY YEAR. Memorize the 10-point distinction table.

UNIT II — HUMAN RESOURCE MANAGEMENT IN HOSPITAL

2-MARK QUESTIONS & ANSWERS

Q1. State the need for hospital's human resource department.
- ➤ Manages recruitment, training, payroll, performance & employee welfare.
- ➤ Ensures right person in right job → quality healthcare delivery.

Q2. What is the need for manpower planning?
- ➤ Ensures adequate staff availability to meet patient care demands.
- ➤ Avoids overstaffing (cost) or understaffing (quality risk).

Q3. Enumerate the role of HRD Manager.
- ➤ Recruitment & selection, training, performance appraisal, grievance handling.
- ➤ Manpower planning, HR inventory, policy implementation, staff welfare.

Q4. What are the guiding principles of HRM?
- ➤ Individual dignity, fair compensation, equal opportunity, job security.
- ➤ Continuous development, participative management, transparent communication.

Q5. What do you understand by 'human resource inventory'?
- ➤ Comprehensive database of all employees — skills, qualifications, experience.
- ➤ Helps in planning promotions, transfers, training needs & succession planning.

Q6. Give the significance of HRM.
- ➤ Optimizes human potential, reduces conflict, improves morale & productivity.
- ➤ Ensures legal compliance, retains talent, supports hospital goals.

Q7. What is one primary step to ensure HR strategy is good?
- ➤ Conducting a thorough Human Resource Inventory (HR audit).
- ➤ Align HR strategy with hospital's vision and patient care objectives.

Q8. What are the characteristics of HRM?
- ➤ Pervasive, continuous, action-oriented, people-focused, future-oriented.
- ➤ Integrates individual & organizational goals.

16-MARK QUESTIONS & ANSWERS

Year	Question Asked
ND2020	Objectives of manpower planning & steps in the process / HR Recruitment model
ND2021	HRM as backbone of organization / Need & benefits of manpower planning
AM2022	Fundamental principles of HRM / Nature & scope of manpower planning
ND2022	Characteristics of HRM + Manpower planning / Skill inventory in HRM
ND2023	HR inventory information & areas it assists / Role of HRM in hospitals
AM2024	Process of identifying staff requirements / Functions of HR department
ND2024	HR inventory planning + manpower planning / Functions of HR dept + HRD manager

Q1. Principles & Functions of HRM in Hospital [★★★]

Definition: HRM = Process of acquiring, developing, motivating and retaining human resources to achieve organizational goals.

Principles of HRM:

- 1. Principle of Individual Dignity: Treat every employee with respect.

- 2. Principle of Scientific Selection: Right person for right job.
- 3. Principle of Fair Compensation: Pay equitable wages & benefits.
- 4. Principle of Team Spirit: Foster cooperation among all staff.
- 5. Principle of Development: Continuous training & skill upgradation.
- 6. Principle of Participation: Involve employees in decision-making.
- 7. Principle of Job Security: Stable employment conditions.

Functions of HRM:

- MANAGERIAL FUNCTIONS:
- • Planning: Forecast HR needs, set HR objectives.
- • Organizing: Structure HR department, assign roles.
- • Directing: Guide and motivate employees.
- • Controlling: Monitor HR performance.
- OPERATIVE FUNCTIONS:
- • Procurement: Recruitment, selection, placement, induction.
- • Development: Training, performance appraisal, career planning.
- • Compensation: Wages, salary, incentives, benefits.
- • Integration: Motivation, job satisfaction, grievance handling.
- • Maintenance: Safety, health, welfare, employee services.

Why HRM is Backbone of Hospital:

- Hospital is people-intensive — 40-60% of budget is HR cost.
- Quality of care depends directly on staff quality & motivation.
- High-stress environment needs strong HR support systems.

Q2. Profile, Role & Responsibilities of HRD Manager [★★★]

Profile of HRD Manager:

- Education: MBA (HR) / MSW / MA (Personnel Management).
- Experience: 5-10 years in hospital/healthcare HR.
- Skills: Communication, leadership, legal knowledge, empathy.

Role of HRD Manager in Hospital:

- 1. Strategic Planning: Align HR plans with hospital goals.
- 2. Recruitment & Selection: Source, screen, select best candidates.
- 3. Training & Development: Identify needs, design, implement programs.
- 4. Performance Management: Appraisal systems, feedback, promotion.
- 5. Compensation Management: Salary structures, incentives.
- 6. Employee Relations: Grievance handling, disciplinary action.
- 7. HR Information System: Maintain accurate HR records.
- 8. Legal Compliance: Ensure adherence to labor laws.
- 9. Welfare Programs: Canteen, transport, insurance, leaves.

Primary Steps for Effective HR Strategy:

- Step 1: Conduct HR audit/inventory.
- Step 2: Analyze current vs. required manpower.
- Step 3: Identify gaps and plan recruitment/training.
- Step 4: Implement HR policies transparently.
- Step 5: Monitor and review HR outcomes regularly.

Q3. Human Resource Inventory — Complete Explanation [★★★]

Definition: A comprehensive, updated database/record of all employees in the hospital.

Information Provided by HR Inventory:

- Personal data: Name, age, gender, address, contact.
- Educational qualifications & professional certifications.
- Work experience (inside & outside hospital).
- Skills inventory: Clinical skills, technical skills, soft skills.
- Performance appraisal history.

- Training programs attended.
- Promotion & transfer history.
- Health status & medical records.

Areas HR Inventory Assists:

- 1. Manpower Planning: Know current strength & future needs.
- 2. Succession Planning: Identify potential for leadership roles.
- 3. Training Needs Analysis: Find skill gaps.
- 4. Promotion & Transfer Decisions: Objective basis for decisions.
- 5. Retirement Planning: Know upcoming vacancies.
- 6. Career Development: Map employee growth paths.

How HR Manager Plans Based on Inventory:

- Compare existing skills vs. required competencies.
- Plan targeted training for skill gaps.
- Identify succession candidates for critical posts.
- Project future hiring needs based on attrition trends.

Q4. Manpower Planning in Hospital — Nature, Scope, Steps [★★★]

Definition: Process of determining & ensuring adequate number & quality of staff to meet hospital's present & future needs.

Nature of Manpower Planning:

- Continuous process — not one-time activity.
- Both qualitative (skills) and quantitative (numbers).
- Linked to hospital's strategic goals.

Scope:

- Covers all categories: doctors, nurses, technicians, admin, support.
- Short-term (1 year) and long-term (5 years) planning.

Objectives:

- Avoid overstaffing & understaffing.
- Reduce recruitment costs through planning.
- Ensure quality care through right staffing.
- Plan for retirements, resignations, expansions.

Benefits:

- Cost savings, reduced turnover, better patient care, legal compliance.

Steps in Manpower Planning Process:

- Step 1 – Organizational Objectives: Understand hospital's goals.
- Step 2 – Current Manpower Audit: Assess existing staff (HR inventory).
- Step 3 – Demand Forecasting: Estimate future staff requirements.
- Step 4 – Supply Forecasting: Internal promotions + external hiring.
- Step 5 – Gap Analysis: Demand minus supply = gap.
- Step 6 – Action Plan: Recruitment, training, transfer to fill gaps.
- Step 7 – Monitoring & Review: Track outcomes, update plan.

■ EXAM TIP: HRM principles, HR inventory and manpower planning steps appear in EVERY exam. Write step-by-step for 16 marks.

UNIT III — RECRUITMENT AND TRAINING

2-MARK QUESTIONS & ANSWERS

Q1. What are training guidelines?

➤ Principles for effective training: clear objectives, appropriate methods, feedback.

➤ Guidelines: assess needs → design → implement → evaluate → improve.

Q2. What is training evaluation?

➤ Process to measure effectiveness of training programs.

➤ Kirkpatrick Model: Reaction → Learning → Behavior → Results.

Q3. List the different types of transfer.

➤ Production transfer, Replacement transfer, Versatility transfer.

➤ Shift transfer, Penal transfer, Remedial transfer.

Q4. What are the guidelines for promotion in hospital?

➤ Based on seniority, merit, performance appraisal, qualifications.

➤ Must be transparent, fair, documented and communicated.

Q5. What is meant by Utility and Administration tests? Purpose?

➤ Utility Test: Measures general aptitude & job-relevant abilities.

➤ Administration Test: Tests leadership, planning & management skills. Purpose: Objective selection of best candidates.

Q6. What is leadership grooming?

➤ Process of identifying high-potential employees and developing them as future leaders.

➤ Methods: mentoring, job rotation, leadership training programs, delegation.

Q7. What is On-The-Job Training?

➤ Training given while employee performs actual work duties.

➤ Types: Job rotation, apprenticeship, coaching, mentoring, committee assignment.

Q8. Define raiding.

➤ Raiding = Poaching talented employees from competing hospitals/organizations.

➤ Unethical but common — countered by good retention policies.

Q9. List sources of recruitment in hospitals.

➤ Internal: Promotions, transfers, referrals, HR inventory.

➤ External: Job portals, campus, consultants, walk-ins, ads, government employment exchange.

Q10. In context of recruitment, how are departments identified in hospital?

➤ Departments identified by function: Clinical (OPD, ICU, OT), Diagnostic (Lab, Radiology),

➤ Nursing, Pharmacy, Admin, Supportive (CSSD, Laundry, F&B;), Management.

16-MARK QUESTIONS & ANSWERS

Year	Question Asked
ND2020	Levels of training & management of technical staff / Sources of recruitment
ND2021	Job Application Form format / Induction program steps & advantages
AM2022	Leadership grooming / Recruitment policies by HR department
ND2022	Internal & external sources + types of transfer / Training need & job evaluation
ND2023	Seniority vs merit promotion / Training evaluation & benefits / Sources of recruitment

AM2024	Recruitment protocols & procedures / Training methods & evaluation
ND2024	Recruitment & selection framework / Training methods, leadership grooming, barriers

Q1. Recruitment & Selection Process in Hospital [★★★]

Definition: Recruitment = Process of attracting qualified candidates for job vacancies.

Internal Sources of Recruitment:

- 1. Promotion from within the hospital.
- 2. Transfer to new department.
- 3. Employee referrals.
- 4. HR inventory (skill database).
- 5. Rehire of former good employees.

External Sources of Recruitment:

- 1. Advertisement (newspaper, digital, hospital notice board).
- 2. Campus placement (nursing colleges, medical colleges).
- 3. Employment agencies & consultants.
- 4. Government employment exchange.
- 5. Walk-in interviews.
- 6. Online portals (Naukri, LinkedIn).

Steps in Selection Process:

- Step 1 – Preliminary Screening: Review applications, reject unqualified.
- Step 2 – Application Form: Detailed background, qualifications, experience.
- Step 3 – Written Tests: Utility test, aptitude, subject knowledge.
- Step 4 – Interview: Panel interview, structured questions.
- Step 5 – Medical Examination: Fitness for duty.
- Step 6 – Reference Check: Verify past employment & character.
- Step 7 – Final Selection & Offer Letter.
- Step 8 – Induction/Orientation: Introduce new employee to hospital.

Key Attributes for Effective Recruitment:

- Clear job description, objective criteria, speed, fairness, documented process.

Q2. Training Methods, Development, Evaluation & Barriers [★★★]

Definition: Training = Process of improving knowledge, skills & attitudes of employees.

Types of Training:

- 1. Induction Training: Orientation for new employees.
- 2. On-the-Job Training (OJT): Learning while working.
- 3. Off-the-Job Training: Classroom, workshops, seminars.
- 4. Vestibule Training: Simulated environment training.
- 5. Apprenticeship: Learn from expert/mentor.
- 6. Management Development Programs (MDP).

Methods of Training:

- Lectures, case studies, role playing, simulation, job rotation, e-learning, group discussions.

How Training Programs are Developed:

- Step 1 – Training Needs Analysis (TNA).
- Step 2 – Define learning objectives.
- Step 3 – Design curriculum & choose methods.
- Step 4 – Select trainers & schedule.
- Step 5 – Implement training.
- Step 6 – Evaluate effectiveness.

Evaluation (Kirkpatrick Model):

- Level 1 – Reaction: Did trainees find it useful? (Feedback forms)
- Level 2 – Learning: Did they learn? (Tests before & after)
- Level 3 – Behavior: Do they apply learning? (Supervisor observation)

- Level 4 – Results: Did it improve hospital performance? (Patient outcomes)

Barriers to Training & Solutions:

- Time constraints → Schedule training in shifts.
- Cost → Use in-house trainers, e-learning.
- Resistance to change → Involve staff in planning.
- No follow-up → Build accountability mechanisms.

Q3. Leadership Grooming & Promotion in Hospital [★★★]

Leadership Grooming = Systematic process to identify & develop future leaders within hospital.

Steps in Leadership Grooming:

- 1. Identification: Spot high-potential employees through appraisals.
- 2. Assessment: 360-degree feedback, leadership tests.
- 3. Development Plan: Personalized Individual Development Plan (IDP).
- 4. Mentoring: Pair with senior leader/mentor.
- 5. Job Rotation: Expose to different departments.
- 6. Stretch Assignments: Give challenging projects.
- 7. Leadership Training: MDP, workshops, conferences.
- 8. Review & Feedback: Regular progress review.

Promotion — Definition & Types:

- Promotion = Advancement to higher position with more responsibility, pay & status.
- Types of Promotion:
- 1. Seniority-based: Promoted based on years of service. Fair but not merit-based.
- 2. Merit-based: Based on performance, skills, results. Motivating but may cause conflict.
- 3. Seniority-cum-merit: Combination — most common in hospitals.

Guidelines for Promotion:

- Clear criteria communicated in advance.
- Documented appraisal records used.
- No discrimination based on gender, religion, caste.
- Appeal mechanism available for rejected candidates.

Q4. Types of Transfer & Induction Program [★★]

Transfer = Movement of employee from one job/department/location to another at same level.

Types of Transfer:

- 1. Production Transfer: When there is surplus in one dept., shifted to short-staffed dept.
- 2. Replacement Transfer: Replace long-serving employee about to retire.
- 3. Versatility Transfer: Develop all-round skills in employee (planned rotation).
- 4. Shift Transfer: Move between day/evening/night shifts.
- 5. Penal Transfer: Punishment for misconduct — shifted to less desirable posting.
- 6. Remedial Transfer: When employee faces personal problem or conflict in current dept.

Reasons for Transfer:

- Hospital needs, employee request, disciplinary action, health reasons, re-organization.

Induction Program in Hospital:

- Induction = Formal process of welcoming and orienting new employees.
- Steps in Induction Program:
- 1. Welcome & introduction to hospital history, mission, values.
- 2. Tour of hospital premises and key departments.
- 3. Introduction to colleagues, supervisors, HODs.
- 4. Explanation of job role, duties, reporting structure.
- 5. Policies: Leave, attendance, dress code, conduct.
- 6. Safety & emergency procedures.
- 7. Patient confidentiality & ethics training.
- 8. Administrative formalities: ID card, payroll, locker.

Advantages of Induction:

- Reduces anxiety, faster settling-in, builds commitment, reduces early attrition.

■ ***EXAM TIP: Recruitment sources + selection steps + training evaluation (Kirkpatrick) are must-know for this unit.***

UNIT IV — SUPPORTIVE SERVICES

2-MARK QUESTIONS & ANSWERS

Q1. What are the functions of laundry services?

➤ Collect, sort, wash, dry, iron, fold, store and distribute clean linen.

➤ Maintain hygiene, prevent cross-infection, manage linen inventory.

Q2. What is the role played by pharmacy department?

➤ Procure, store, dispense drugs safely; maintain drug inventory.

➤ Advise on drug interactions, ensure rational drug use, manage controlled substances.

Q3. What are the main objectives of CSSD?

➤ Provide sterile supplies to all departments reliably & safely.

➤ Prevent hospital-acquired infections through proper sterilization.

Q4. Give the list of space and equipment for hospital laundry.

➤ Space: Soiled linen room, washing area, drying room, ironing room, clean linen store.

➤ Equipment: Washing machines, hydro-extractors, tumble dryers, flatwork ironer, folding table.

Q5. Illustrate functions of medical records in hospital.

➤ Document patient history, diagnosis, treatment, outcomes.

➤ Legal evidence, research, statistics, insurance claims, continuity of care.

Q6. What is the importance of support services in hospital?

➤ Enable clinical departments to focus on patient care.

➤ Maintain hygiene, supply sterile materials, provide food, manage records.

Q7. How is inventory size decided in a pharmacy?

➤ Based on consumption rate, lead time, safety stock, bed strength.

➤ Formula: Safety stock + (lead time × avg daily consumption).

Q8. Identify services provided by food and nutrition dept.

➤ Patient diets (therapeutic, regular), staff canteen, visitor food.

➤ Nutritional counseling, special diets for ICU/diabetic/renal patients.

Q9. How is medical waste categorized in hospitals?

➤ Yellow: Infectious/pathological, Red: Recyclable plastics,

➤ White/Translucent: Sharps, Blue/Black: General waste. (BMW Rules 2016)

Q10. Outline space requirements for laundry services.

➤ 2–2.5 sq.m per bed for hospital laundry.

➤ Separate zones: soiled receiving, washing, drying, clean storage, distribution.

16-MARK QUESTIONS & ANSWERS

Year	Question Asked
ND2020	Functions of Medical Records + flowcharts admission/discharge / CSSD objectives & procedures
ND2021	Role of food services dept / Importance of medical records department
AM2022	Role of food services dept / Requirements for pharmacy dept
ND2022	Functions of CSSD + planning of laundry / Drug distribution + medical record dept
ND2023	CSSD strategies & advantages / Importance of medical records & maintenance
AM2024	Equipment used in sterilization & guidelines / Merits of digital records + MRD functions

ND2024	CSSD procedures + major equipment / Functions of MRD + inpatient record flow

Q1. Medical Records Department (MRD) — Functions, Location, Flowchart [★★★]

Definition: MRD = Department responsible for creating, storing, managing and retrieving all patient health records.

Importance of Medical Records:

- Legal document — evidence in court.
- Continuity of care — reference for future treatment.
- Research and statistics.
- Insurance & reimbursement claims.
- Hospital accreditation (NABH requirement).

Functions of MRD:

- 1. Collection of records from wards/OPD.
- 2. Indexing & coding (ICD-10 coding).
- 3. Filing & storage (manual/electronic).
- 4. Retrieval for follow-up visits.
- 5. Birth & death registration.
- 6. Medico-legal records management.
- 7. Statistical reports for management.
- 8. Release of information (authorized only).

Location & Area Requirements:

- Location: Ground floor, near OPD — easy access, good footfall.
- Area: 30-50 sq.m for 100-bed hospital; increases with bed strength.

Medical Records Flowchart on ADMISSION:

- Patient arrives → Registration counter → New case sheet created →
- Demographic data entered → Case file issued → Patient sent to OPD/ward.

Medical Records Flowchart on DISCHARGE:

- Doctor completes discharge summary → Nursing note finalized →
- Case file collected by MRD → Coding (ICD-10) → Filing → Storage.

Digital Records (EMR/EHR) Advantages:

- Instant access, reduced errors, space saving, easy data analysis, interoperability.

Q2. CSSD — Objectives, Functions, Procedures, Equipment [★★★]

Definition: CSSD = Central Sterilization and Supply Department — hub for sterilizing & distributing supplies.

Objectives:

- Provide sterile supplies reliably to all clinical departments.
- Prevent hospital-acquired infections (HAI).
- Achieve economic use of resources.

Location: Central location — easy access from OT, wards, ICU.

Flow in CSSD (Unidirectional — from soiled to clean):

- SOILED ZONE → Decontamination → Inspection & Assembly → Packing →
- Sterilization → STERILE STORAGE → Distribution → Departments.

Major Equipment Used:

- 1. Autoclave (Steam Sterilizer): Most common — kills all microorganisms at 121°C, 15 psi, 15 min.
- 2. Hot Air Oven (Dry Heat): For glassware, oils — 160°C for 1 hr.
- 3. ETO Sterilizer (Ethylene Oxide): Heat-sensitive items — endoscopes, plastics.
- 4. Plasma Sterilizer: Low temperature — for sophisticated instruments.
- 5. Ultrasonic Cleaner: Pre-sterilization cleaning.
- 6. Washer-Disinfector: Automated cleaning & disinfection.
- 7. Sealing Machine: Heat sealing of sterilization pouches.

Procedures:

- Receive → Decontaminate → Clean → Inspect → Pack → Sterilize → Store → Distribute.

Staffing Norms:

- 1 CSSD technician per 50 beds; 1 supervisor per 200 beds.
- All staff must wear PPE — gown, gloves, mask, goggles.

Q3. Pharmacy Department — Requirements, Pharmacist Role, Drug Distribution [★★★]

Definition: Hospital pharmacy = Department responsible for safe procurement, storage and dispensing of drugs.

Requirements for Running a Pharmacy:

- Infrastructure: Counter area, dispensing area, storage room (cold chain for vaccines).
- Drug Licenses: State Drug License, Narcotic license (for Schedule X drugs).
- Qualified Staff: Registered pharmacist mandatory.
- Records: Prescription register, narcotic register, expiry register.
- Refrigerators for vaccines/insulin; fire safety measures.

Role of Pharmacist:

- 1. Drug dispensing — accurate, as per prescription.
- 2. Drug information service — advise doctors/patients.
- 3. Drug interaction checking.
- 4. Inventory management — procurement, storage, expiry tracking.
- 5. Controlled substance management (narcotics register).
- 6. Participate in hospital formulary committee.

Drug Distribution Systems:

- 1. Individual Prescription Order System: Pharmacist dispenses each prescription.
- 2. Floor Stock System: Drugs kept on ward, nurse dispenses.
- 3. Unit Dose Dispensing System (UDDS): 24-hour supply per patient — safest, reduces errors.
- 4. Combination System: Mix of above — most common in India.

Determining Inventory Size:

- Based on: Bed strength, OPD load, consumption pattern, lead time, safety stock.
- ABC Analysis: A = high value (tight control), B = medium, C = low value.
- VED Analysis: V = Vital, E = Essential, D = Desirable.

Q4. Food Services Department in Hospital [★★★]

Definition: Hospital food services = Dept. responsible for planning, preparing & serving nutritious meals to patients, staff & visitors.

Role of Food Services:

- Provide therapeutic diets to aid recovery.
- Maintain nutritional standards for all patients.
- Run staff canteen for employee welfare.
- Provide visitor cafeteria.

How It Can Be Divided:

- 1. Main Kitchen: Bulk cooking for patients & staff.
- 2. Diet Kitchen: Special therapeutic diets.
- 3. Staff Canteen: Subsidized meals for employees.
- 4. Visitor Cafeteria: Commercial food service.

Types of Diets:

- Regular diet, Soft diet, Liquid diet, Clear liquid, High protein, Low fat,
- Diabetic diet, Renal diet, Cardiac diet, Post-surgical diet.

Nutritional Standards:

- 2000–2200 kcal/day for general patients.
- High protein for post-surgical; low sodium for cardiac; low sugar for diabetic.

Location Requirements:

- Ground floor — near service elevator, easy delivery.
- Separate entry from patient areas, close to wards.

Staffing:

- Chief Dietitian, Dietitians (per 100 beds), Cooks, Food service assistants.
- 1 dietitian per 100 beds recommended.

Laundry — Brief (also important):

- Functions: Collect, wash, dry, iron, fold, distribute linen.
- Types of linen: Bed sheets, pillow covers, towels, OT linen, surgical gowns.
- Linen norm: 4-6 sets per bed.

■ EXAM TIP: MRD flowcharts (draw admission & discharge), CSSD equipment list and UDDS for pharmacy are diagram/list heavy questions — practice drawing them.

UNIT V — COMMUNICATION AND SAFETY ASPECTS IN HOSPITAL

2-MARK QUESTIONS & ANSWERS

Q1. What is ISDN mode of communication?

➤ ISDN = Integrated Services Digital Network — digital telephone network.

➤ Provides simultaneous voice, data, video transmission; faster than analog; used for telemedicine.

Q2. What precautions are taken for fire safety?

➤ No smoking signs, fire exits marked, fire extinguishers on each floor.

➤ Fire drills, sprinkler systems, smoke detectors, staff training.

Q3. What is the need for voltage fluctuation alarm?

➤ Protects life-support & critical equipment from power surges.

➤ Alerts staff immediately to power issues — switch to backup power (UPS/generator).

Q4. What all points to be included in safety programme of institution?

➤ Fire safety, electrical safety, infection control, radiation safety,

➤ Patient fall prevention, security, disaster preparedness, staff training.

Q5. What is downward communication? Give examples.

➤ Communication from higher to lower hierarchy levels.

➤ Examples: Policies, instructions, memos, circulars, SOPs issued by management to staff.

Q6. What are the main factors causing accidents in hospital?

➤ Wet floors, poor lighting, improperly stored equipment, staff fatigue.

➤ Lack of training, faulty equipment, poor signage, rush hours.

Q7. Write features of safety rules in hospital.

➤ Clear, simple, posted visibly, language of staff, regularly updated.

➤ Cover: fire, electrical, patient handling, chemical, radiation & general safety.

Q8. Comment on facilities provided by ISDN in hospital management.

➤ Video conferencing for telemedicine, fast data transfer for imaging (PACS).

➤ Integrated phone+data network, remote monitoring, inter-hospital communication.

Q9. Why is blood bank alarm needed?

➤ Blood products must be stored at precise temperature (2-6°C for RBCs).

➤ Alarm alerts staff to temperature deviation — prevents spoilage of life-saving blood.

Q10. Mention advantages of centralized medical gas system.

➤ No cylinder handling in wards, safer, continuous supply, lower cost long-term.

➤ Pipeline from central store to bedside — oxygen, nitrous oxide, suction, compressed air.

Q11. Name location for installing public address system in hospital.

➤ At all nursing stations, OPD waiting areas, corridors, reception, cafeteria.

➤ Emergency areas, parking, all floors — basically hospital-wide coverage.

Q12. How to ensure safety of movable assets in hospital?

➤ Asset tagging (barcode/RFID), regular inventory audits, CCTV monitoring.

➤ Access control to restricted areas, security personnel, entry/exit logs.

16-MARK QUESTIONS & ANSWERS

Year	Question Asked
ND2020	Different modes of communication in hospital / Alarm systems in hospitals

ND2021	Barriers to communication / Requisites of good safety programme
AM2022	General fire information & responsibilities / List and explain modes of communication
ND2022	Hospital safety rules / Security and loss-prevention program
ND2023	CCTV + security alarm / Purpose, function & importance of medical records
AM2024	Modes of communication & suitability / Fire safety alarms regulations
ND2024	Communication modes & equipment / Safety guidelines + public address & CCTV positioning

Q1. Modes of Communication in Hospital — Complete [★★★]

Purpose of Communication in Hospital:

- Coordinate patient care, give/receive orders, emergency alerts, administrative info.

Planning of Communication:

- Map all communication needs (emergency, routine, administrative).
- Select appropriate technology for each use case.
- Ensure backup systems (if primary fails).

Modes of Communication:

1. Telephone System:

- EPABX (Electronic Private Automatic Branch Exchange) — internal & external calls.
- Suitability: Routine orders, doctor-nurse communication, appointments.
- Must have: Emergency hotline numbers posted everywhere.

2. ISDN (Integrated Services Digital Network):

- Digital network — simultaneous voice + data + video.
- Suitability: Telemedicine, radiology image transfer, video consultations.

3. Public Address (PA) System:

- Loudspeaker system for announcements to entire hospital.
- Locations: All floors, waiting areas, corridors, emergency.
- Suitability: Code Blue announcements, general instructions, fire alerts.

4. Piped Music System:

- Background music in OPD, corridors — reduces patient anxiety.
- Soft, soothing music — not in ICU, OT areas.

5. Intercom / Internal Phone:

- Department-to-department quick communication.

6. Paging System:

- One-way alerts to doctors/staff carrying pagers.

7. Nurse Call System:

- Patient presses button → nurse station bell rings.
- Suitability: Bedside patient-to-nurse communication.

8. Mobile/Wireless Communication:

- Walkie-talkies for security, mobile phones for doctors.
- Caution: Mobiles may interfere with ICU equipment.

9. CCTV:

- Surveillance — security & safety monitoring.

Essentials of Effective Communication Plan:

- Reliability, speed, clarity, backup systems, coverage of all areas.

Q2. Fire Safety in Hospital — Complete Guide [★★★]

General Fire Information:

- Fire triangle: Fuel + Oxygen + Heat → Fire.
- Remove any one element to extinguish fire.
- Types of fire:

- Class A: Ordinary combustibles (paper, wood) — Water/foam extinguisher.
- Class B: Flammable liquids (alcohol, oil) — CO2/dry powder.
- Class C: Electrical fires — CO2 extinguisher (NEVER water).
- Class D: Metals — Special dry powder.

Fire Prevention Measures:

- No smoking policy strictly enforced.
- Regular electrical wiring inspection.
- Proper storage of flammable materials (oxygen cylinders, alcohol).
- Fire doors and fire-resistant construction.
- Smoke detectors and sprinkler systems.

Fire Alarm System:

- Smoke detectors, heat detectors, manual pull stations.
- Connected to central control panel — zone-wise alarm.
- Tested every 6 months; must not be disabled.

Basic Responsibilities of Every Employee During Fire:

- R – Rescue: Move patients in immediate danger.
- A – Alarm: Activate nearest fire alarm pull station.
- C – Confine: Close all doors to prevent spread.
- E – Extinguish/Evacuate: Use extinguisher if safe, else evacuate.
- (RACE Protocol — standard hospital fire response)

Evacuation Plan:

- Designated assembly points, fire wardens on each floor.
- Horizontal evacuation first (move to adjacent fire zone).
- Vertical evacuation only if necessary (use stairs, NOT elevator).

Fire Drill:

- Conducted minimum twice a year.
- All staff — clinical & non-clinical — must participate.

Q3. Alarm Systems in Hospital — All Types [★★★]

Why Alarms Must Be Planned at Development Stage:

- Retrofitting is expensive & disruptive. Proper wiring, panels & zones must be built in.

1. Fire Alarm System:

- Smoke + heat detectors → Control panel → Zone-wise alarm.
- Sprinklers activated automatically.

2. Medical Gas Alarm:

- Monitors pipeline pressure of O2, N2O, CO2, suction, compressed air.
- Area alarm (outside each dept.) + Master alarm (at engineering/nursing station).
- Alerts when pressure drops below threshold — critical for ICU/OT patients.

3. Blood Bank Alarm:

- Temperature monitoring of blood bank refrigerators (2-6°C).
- Alerts when temperature deviates — blood products spoil quickly.
- Visual + audible alarm; connected to duty pharmacist/blood bank technician.

4. Code Blue Alarm:

- Activated when patient has cardiac/respiratory arrest.
- PA system announces 'Code Blue' + location.
- Resuscitation team responds within 3 minutes.

5. Voltage Fluctuation Alarm:

- Protects critical equipment (ventilators, ICU monitors, OT equipment).
- Alerts when voltage deviates ±10% from 230V.
- Triggers automatic switch to UPS/generator.

6. Security Alarm:

- Perimeter alarms, door sensors, CCTV motion detection.

- Alerts security personnel to unauthorized access.

7. Elevator Alarm:

- Emergency button in elevator — alerts security if stuck.
- Telephone in elevator cabin for direct communication.

Exam Tip: For 16 marks — explain each alarm with: Purpose, Location, How it works, Who responds.

Q4. Security, Loss Prevention & CCTV in Hospital [★★]

Security Program Objectives:

- Protect patients, staff, visitors and hospital property.
- Prevent theft, violence, unauthorized access.

Security Measures:

- 1. Entry/Exit Control: ID cards, visitor badges, security gates.
- 2. Security Personnel: Trained guards at all entry points, parking, casualty.
- 3. CCTV Surveillance: 24×7 recording of all critical areas.
- 4. Restricted Areas: OT, ICU, pharmacy, server room — access controlled.
- 5. Night Security: Enhanced patrolling during night hours.

CCTV — Positioning:

- Entrances & exits (all), Reception & OPD waiting, Emergency room.
- Parking areas, corridors, pharmacy, blood bank.
- Stairways, lifts, ICU, NICU (corridor outside).
- Not inside patient rooms or bathrooms (privacy).

Loss Prevention Program:

- Regular inventory audits — drugs, linen, equipment.
- Asset tagging (barcode/RFID) on all movable equipment.
- Exit verification — bags checked at security.
- Dual authorization for high-value drug dispensing.
- Staff lockers & clear personal item policy.

Public Address System Contribution to Safety:

- Rapid mass communication during emergencies.
- Code announcements (Code Blue, Code Red for fire).
- Evacuation instructions during disasters.

Safety Rules in Hospital:

- Posted in local language, visible locations.
- Cover: wet floor, sharp disposal, fire exits, no smoking, patient handling.
- Revised annually or after any incident.

Q5. Disaster Preparedness — Bomb Threat & Safety Programme [★★]

Requisites of Good Safety Programme:

- 1. Top management commitment.
- 2. Safety committee with representation from all departments.
- 3. Clear written safety policies & SOPs.
- 4. Regular training & drills for all staff.
- 5. Incident reporting system (near misses + accidents).
- 6. Root cause analysis of accidents.
- 7. Adequate safety equipment (PPE, fire extinguishers, AEDs).
- 8. Regular inspection & audit of safety conditions.

Bomb Threat Disaster Preparedness Plan:

- Receive threat → Do NOT panic → Note exact words + caller details.
- Immediately inform: Security chief, Hospital administrator, Police (100).
- Activate evacuation plan — systematic area-by-area search.
- DO NOT use mobile phones or walkie-talkies near suspected device.
- Evacuation: Move patients to safe zone (horizontal first, then vertical).
- Security + police conduct sweep — hospital staff do NOT touch suspicious objects.

- After all-clear: Log incident, debrief, review response.

Safety Rules for Staff:

- Report unsafe conditions immediately.
- Use PPE appropriate for job.
- Do not bypass safety locks/guards.
- Know location of fire extinguisher, emergency exit, AED.
- Attend all mandatory safety drills.

■ EXAM TIP: Communication modes + alarm systems + fire safety RACE protocol appear in EVERY exam. Draw CCTV positioning diagram for extra marks.

QUICK REVISION — IMPORTANT SHORT NOTES

MUST-KNOW TABLES & LISTS

★ HOSPITAL vs INDUSTRY — 8-Point Table (Very Frequently Asked)

Parameter	Hospital	Industry
Purpose	Patient care	Profit/Production
Output	Intangible (health)	Tangible (goods)
Hours	24×7×365	Fixed shifts
Accountability	Life & death	Products/services
Customers	Patients (vulnerable)	Customers (choice)
Staff	Multi-disciplinary	Specialized workers
Ethics	Strict medical ethics	Business ethics
Measurement	Patient outcomes	Profit/Loss

★ KIRKPATRICK 4-LEVEL TRAINING EVALUATION MODEL

Level	Name	Question Asked	Method
1	Reaction	Did they like it?	Feedback forms
2	Learning	Did they learn?	Pre/post tests
3	Behavior	Did they apply?	Supervisor observation
4	Results	Did hospital improve?	KPIs, outcomes

★ CSSD STERILIZATION METHODS — QUICK REFERENCE

Method	Temperature	Time	Used For
Autoclave (Steam)	121°C	15-20 min	Instruments, linen, dressings
Hot Air Oven	160°C	1 hour	Glassware, oils, powders
ETO Gas	Room temp	2-16 hrs	Heat-sensitive plastics, endoscopes
Plasma Sterilizer	45-50°C	28-75 min	Delicate electronics, scopes

★ FIRE CLASSES & EXTINGUISHERS

Fire Class	Type	Extinguisher
Class A	Paper, wood, cloth	Water / Foam
Class B	Flammable liquids	CO2 / Dry powder
Class C	Electrical equipment	CO2 ONLY (not water!)
Class D	Metals	Special dry powder

KEY ACRONYMS & FORMULAS TO REMEMBER

- RACE (Fire Response): Rescue → Alarm → Confine → Extinguish/Evacuate
- CSSD: Central Sterilization and Supply Department
- MRD: Medical Records Department
- HRM: Human Resource Management | HRD: Human Resource Development
- UDDS: Unit Dose Dispensing System (safest drug dispensing method)
- ISDN: Integrated Services Digital Network
- NABH: National Accreditation Board for Hospitals (quality standard)
- TNA: Training Needs Analysis | ICD-10: International Classification of Diseases
- EPABX: Electronic Private Automatic Branch Exchange (hospital telephone)
- ETO: Ethylene Oxide (sterilization gas for heat-sensitive items)
- ABC Analysis: A=High value tight control | B=Medium | C=Low value
- VED Analysis: V=Vital | E=Essential | D=Desirable (pharmacy stock control)
- Six Sigma DMAIC: Define → Measure → Analyze → Improve → Control
- Bed Norm: 3-5 beds per 1000 population | ICU: 5-10% of total beds
- Linen Norm: 4-6 sets per bed | Laundry space: 2-2.5 sq.m per bed

TOP 10 MOST REPEATED QUESTIONS (2020-2024)

#	Unit	Question	Frequency
1	**Unit I**	Distinction between hospital and industry	Appears EVERY year
2	**Unit I**	Challenges in hospital administration	Appears EVERY year
3	**Unit II**	Principles and functions of HRM in hospital	Appears every year
4	**Unit II**	Manpower planning — nature, objectives, steps	Appears every year
5	**Unit III**	Recruitment sources & selection process	Appears every year
6	**Unit III**	Training methods, evaluation, barriers	Appears every year
7	**Unit IV**	Medical Records — functions, flowcharts	Appears every year
8	**Unit IV**	CSSD — objectives, functions, equipment	Appears every year
9	**Unit V**	Modes of communication in hospital	Appears every year
10	**Unit V**	Alarm systems in hospital	Appears every year

ALL THE BEST FOR YOUR EXAMS! ■

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