



**MAHATMA GANDHI UNIVERSITY**  
*of*  
**MEDICAL SCIENCES & TECHNOLOGY**  
JAIPUR

# **Syllabus**

**B.Sc. HOSPITAL AND HEALTH INFORMATION  
ADMINISTRATION  
(3 YEARS DEGREE COURSE)**

## **Notice**

1. Amendments made by the Board of Management of the University in Rules/ Regulations of Graduate Medical Courses shall automatically apply to the Rules/ Regulations of the Mahatma Gandhi University of Medical Sciences & Technology.
2. The University reserves the right to make changes in the syllabus/ books/ guidelines, fee-structure or any other information at any time without prior notice. The decision of the University shall be binding on all.
3. The jurisdiction of all court cases shall be Jaipur Bench of Hon'ble Rajasthan High Court only.

**RULES & REGULATIONS OF**  
**B. Sc. in Hospital and Health Information Administration - 7320**

**DURATION OF COURSE:**

The course shall be of 3 years duration from the date of commencement of academic session

**MEDIUM OF INSTRUCTION**

English shall be the medium of instruction.

**ELIGIBILITY FOR ADMISSION:**

- Pass in 12<sup>th</sup> class of 10 +2 of CBSE or equivalent with minimum aggregate of 50% marks in physics, chemistry and biology or mathematics, provided the candidate has passed in each subject separately.

**OR**

- Diploma in Health Information Management after Pass in 12<sup>th</sup> class of 10 +2 of CBSE or equivalent with minimum aggregate of 50% marks in physics chemistry and biology or Mathematics provided the candidate has passed in each subject separately.

**OR**

- Candidates with two years diploma from a recognized Government Board in a subject for which the candidate desires to enroll, in the respective Allied Health Sciences course and shall have passed plus 12 [10+2] with Physics, Chemistry and Biology or Mathematics, as principal subjects.

**OR**

- Candidates with three years diploma from a recognized Government Board in a subject for which the candidate desires to enroll, in the respective Allied Health Sciences course & should have studied Physics, Biology and Chemistry as principal subjects during the tenure of the course.

**SELECTION OF CANDIDATES:**

1. Admission to B.Sc. Hospital and Health Information Administration course shall be made on the basis of eligibility criteria set by University.
2. Successful candidates on the basis of 12<sup>th</sup> percentage obtained will be called for the University combined entrance examination. The interview board will include the Principal of College of Health Informatics and Head of the Institution, whose recommendations shall be final for the selection of the students.
3. During subsequent counseling (s) the seat will be allotted as per the merit of the candidate depending on the availability of seats on that particular day.
4. Candidate who fails to attend the Medical Examination on the notified date(s) will forfeit the claim for admission and placement in the waiting list except permitted by the competent authority under special circumstances.

5. The name of the student(s) who remain(s) absent from classes for more than 15 days at a stretch after joining the said course will be struck off from the college rolls without giving any notice.

**Provision of Lateral Entry:**

Lateral entry to second year for BSc Hospital and Health Information Administration course for candidates who have passed diploma program from the Government Boards and recognized by State/Central University, fulfilling the conditions specified and these students are eligible to take admission on lateral entry system only in the same subject studied at diploma level. Admissions will be allotted on basis of merit of respective qualifying examinations.

**COMMENCEMENT OF THE COURSE**

The Course shall commence from the 1<sup>st</sup> August of every Academic year.

**RESERVATION:**

Reservation of seats shall be applicable in accordance with Rajasthan State Government reservation policy.

**ATTENDANCE:**

75% in theory and 80% in practical/clinical in each year. Any one failing to achieve this, shall not be allowed to appear in the University examination.

**ENROLMENT:**

Every candidate who is admitted to B.Sc. **Hospital & Health Information Administration** Course in Mahatma Gandhi College of Health Informatics shall be required to get himself/herself enrolled with the Mahatma Gandhi University of Medical Sciences & Technology after paying the prescribed eligibility/enrollment fees.

The candidate shall have to submit the application form duly filled in and forwarded to the University through Principal of the College for the enrollment/eligibility along with the original documents with the prescribed fees (up to November 30 of the year of admission without late fees and up to December 31 of the year of admission with late fees)

**SCHEME OF EXAMINATION**

1. **Theory**

- (a) Each Theory paper examination shall be of 3 hours duration and of max marks 80.
- (b) Internal assessment shall be of 20 marks for Each Theory paper.
- (c) The number of question papers shall be in accordance with the different subjects/areas covered during the B.Sc. three years course. The number of question papers shall be as under:

Name of Course	Theory			Paper Set & Evaluated by	
	Total Marks	Pass Marks	Papers	First and Second Year	Third (Final) Year

1	B.Sc. in Hospital & Health Information Administration	300	150	3 question papers for each year	4 Internal Paper Setters	3 Internals + 1 External paper setter
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- (d) For the First and Second year examinations – these respective above question papers shall be set by the Internal Examiners covering their respective areas of syllabus. For each question paper there shall be a separate Internal Examiner. The answer books shall be evaluated by the concerned Internal Examiners (Papers Setters).
- (e) In Third (Final) Year examination, one of the papers shall be set and evaluated by an External Examiner. In other words, one of the Internal has to be substituted by the External Examiner. The External Examiner (Paper Setter) shall evaluate his/her paper.
- (f) The Paper Setter shall set the questions within the prescribed course of study of the concerned paper. There will be a set pattern of question papers duly approved by Academic Council. Model question paper is annexed herewith.
- (g) It is to be noted that the Internal and External Examiners of all the three years (First, Second and Third year) shall be appointed by the President of the University. This exercise shall be conducted through the office of the Controller of the Examinations of the University. The External Examiner of Third year shall also be appointed by the President out of the panel of names submitted by the Concerned Coordinator of the course through the Dean to the Controller of Examinations for appointment of Examiners by the President of the University.
- (h) Passing Marks: A candidate will have to obtain at least 50% marks in each Theory paper including internal assessment to pass. This means that he will have to score 50% marks in each paper. This shall include the marks obtained in Theory paper of 80 marks and internal assessment for that paper of 20 marks (Marks obtained in Theory paper + Marks obtained in internal assessment = the Total Marks obtained in respect of each paper).

## 2. Practical and Viva-Voce Examination

- (a) Each year there shall be one practical and viva-voce examination. It shall be conducted after the Theory examination is over.
- (b) The pattern of practical examination in different years of the **B.Sc. in Hospital & Health Information Administration** degree course shall be as follows.
- (c) The pattern shall be as follows –

S. No.	Name of Course	Practical		Practical Examiners		
		Total Marks	Pass Marks	First year	Second year	Third year
1	<b>B.Sc. in Hospital &amp; Health Information Administration</b>	300	150	3 Internal Examiners (+Expert(s) if needed)	4 Examiners (3 Internal+ 1 External)	4 Examiners (3 Internal+ 1 External)

- (d) The experts: There shall be the provision for the experts where needed to be inducted as adviser(s) who shall only help the Internal Examiners to evaluate the students in adjunct areas of the course which do not warrant the appointment of separate examiners. It is to be noted that the experts shall not award any marks. The Coordinator of the course shall submit the name(s) of the expert(s) which shall be approved by the President.
- (e) Total marks of the practical examination shall be equivalent to the total marks put together of the number of Theory papers in the **B.Sc. in Hospital & Health Information Administration** course.
- (f) It shall be left to the examiners – Internals and the External, as the case may be, to examine and evaluate the students in practical in the way they wish and award the marks without giving any specific details. The total marks obtained by the candidate in the practical examination shall be the aggregate of the marks awarded by all the examiners put together as one figure. This shall then be submitted to the University. For example four practical examiners, if a candidate scores 60 (first examiner), 50 (second examiner), 50 (third examiner) plus 60 (fourth examiner) – total  $60+50+50+60 = 220$  shall be submitted as one figure to the University. The award sheet shall be signed by all the practical examiners. The experts (where inducted) shall not sign the award sheet of the practical examination.

### 3. **Result:**

- 1. A candidate will have to obtain at least 50% marks separately in each Theory paper including internal assessment and a minimum of 50% marks in the practical examination for him to be declared pass.
- 2. A Candidate who has failed in theory paper/s will reappear in respective theory papers/s in supplementary examination.
- 3. Candidate who has failed in Practical examination only will reappear only in practical examination in Supplementary examination.

### 4. **Supplementary Examination:**

- (a) Eligibility for the failed candidates to appear at the supplementary examination shall be as below –
  - i. Failed in Theory Paper(s) and failed in Practical – shall reappear in the respective failed Theory paper(s) and Practical examination.
  - ii. Failed in Theory paper/papers and passed in Practical examination – shall reappear only in the concerned failed Theory paper(s).
  - iii. Passed Theory papers but failed in Practical – shall reappear only in the Practical Examination.
- (b) There shall be a supplementary examination within two months of the declaration of the result of the main examination. Internal assessment marks obtained in main examination in the concerned failed paper/papers shall be carried forward for working out the result of supplementary Theory paper(s) examination. Such candidate who has secured less than 50% marks in the internal assessment will be allowed to improve his internal assessment marks in the repeat supplementary internal assessment examination.
- (c) Marks secured by the candidate in passed main examination/supplementary examination Theory paper(s) and/or practicals, as the case may be, will be carried forward for working out his result.
- (d) Result:

- i. A candidate obtaining at least 50% marks in the supplementary Theory paper(s) and 50% marks in the supplementary practical examination, as the case may be, shall be declared successful.
- ii. A candidate who has failed in supplementary theory paper(s) examination shall have to reappear only in the failed theory paper(s) at the subsequent main examination.
- iii. A candidate who has failed in supplementary practical examination shall have to reappear both in theory (all papers) and practical at the next main examination.

#### 5. Promotion to Second/Third Year

- (a) A candidate failed in theory paper(s) /Practical examination only shall be promoted to next year.
- (b) A candidate will be allowed to appear for the Final (3<sup>rd</sup>) year examination only when the backlog of all papers (theory and practical) of 1<sup>st</sup> and 2<sup>nd</sup> year Exams is cleared
- (c) The student is required to complete the course within 6 years from the joining of the course

#### 6. Result - Division: Successful candidates will be categorized as under-

1	Those, securing 50% and above but less than 60% in the aggregate marks of First, Second & Third year taken together	Pass
2	Those, securing 60% and above but less than 75% in the aggregate marks of First, Second & Third year taken together	Pass with I Division
3	Those, securing 75% and above in the aggregate marks of First, Second & Third year taken together	Pass with Honors

#### PAPER SETTER/EXAMINER

1. All the examiners, paper setters, theory examination answer books evaluators, Internal and External Examiners for Practical examinations shall be appointed by the President of the University.
2. Qualification of the Paper setter / Examiner: Assistant Professor and above. Master degree with minimum 2 years' experience in industry/academia.
3. Paper setter can be an examiner

#### REVALUATION / SCRUTINY

Re-evaluation of answer book(s) of the **B.Sc. in Hospital & Health Information Administration** course may be permissible in not more than 25% of the theory papers within 15 days from the date of declaration of examination result on submission of his/her application on the prescribed form along with the requisite fees. Such answer book(s) shall be re-evaluated as per University rules. Reevaluation of answer book(s) shall not be permitted for second attempt in any paper.

Scrutiny (re-totaling) of answer book(s) of the **B.Sc. in Hospital & Health Information Administration** course may be permissible within 15 days from the date of declaration of examination result on submission of his/her application on the prescribed form along with the requisite fees as per University Rules.

#### **GRACE MARKS**

1. A student who appears in the whole examination in first attempt and obtains the required minimum pass marks in the total aggregate of an examination but fails to obtain the minimum pass marks in one subject (in theory and / or practical as the case may be) will be awarded the grace marks up to a maximum of 05 marks according to the following scale, provided the candidate passes the examination by award of such grace marks:

<b>Marks obtained by the candidate above the required minimum aggregate pass marks</b>	<b>Grace marks can be given up to</b>
Up to 6 marks	02
Up to 12 marks	03
Up to 18 marks	04
19 marks and above	05

2. No grace marks would be awarded to a candidate who appears in part/ supplementary/remand examination. Non-appearance of a candidate in any part of the examination on account of any reason will make him ineligible for grace marks.
3. A candidate who passes the examination after the award of grace marks in a paper/practical or the aggregate will be shown in the marks sheet to have passed the examination by grace. Grace marks will not be added to the marks obtained by a candidate from the examiners.
4. A candidate who is awarded grace marks in any subject to pass the examination will not be entitled for distinction in any subject.



## Syllabus

### **B.Sc. in Hospital & Health Information Administration.**

**Note:** Topics to be covered under the syllabus including but not limited to are as follows:

### **B.Sc. in Hospital & Health Information Administration.**

#### **Theory**

#### **First Year**

#### **Paper 1 : Basic of informatics (7321)**

##### **Introduction to National Healthcare System**

Introduction to healthcare delivery system, National Health Program, Health scenario of India- past, present and future, Demography & Vital Statistics, Epidemiology.

##### **Basic computers and information science**

Introduction to computer, Input output devices, Processor and memory, Storage Devices, windows, MS-Word, Introduction to Excel, power-point, Operating System, Computer networks, Internet and its Applications, Application of Computers in clinical settings.

##### **Medical law & ethics**

Medical ethics, Code of conduct, Basic principles of medical ethics, Malpractice and negligence, Autonomy and informed consent, Care of the terminally ill, Organ transplantation, Medico legal aspects of medical records, obtaining an informed consent.

##### **Communication and soft skills**

Basic Language Skills, Business Communication Skills, Basic concepts & principles of good communication, Special characteristics of health communication, Types & process of communication, Barriers of communication & how to overcome, Reading Skills, Listening skills, Speaking Skills, Writing Skills, Study Skills, Effective communication in Hospitals

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## **Paper 2 : Medical Terminology (7322)**

### **Introduction to Quality and patient safety**

Quality assurance and management, Basics of emergency care and life support skills, Bio medical waste management, Infection prevention and control.

### **Professionalism and Values**

Professional values, Personal values, Attitude and behavior, Code of conduct, professional accountability and responsibility, misconduct, team efforts, Cultural issues in the healthcare environment

### **Medical Terminology**

Introduction to Medical Terminology, Terms, Skeletal System, Muscular System, Integumentary System, Cardiovascular System, Respiratory System, Gastro-Intestinal System, Genito-Urinary System, Endocrine System, Nervous System, Sensory Organs, Multiple-System Diseases.

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## **Paper 3 : Research methodology & Management (7323)**

### **Research Methodology and Bio statistics, Hospital Statistics**

Research Methodology: Introduction to research methods, Identifying research problem, Ethical issues in research, Research design, Types of Data, Research tools and Data collection methods, Sampling methods, Developing a research proposal, Research in medicine and health care, Clinical research and clinical trials, Defining the research question (problem), Determining a research design and method, Data collection procedures, Data analysis, Presenting results.

Bio-Statistics :Definition, Role, Variables, Scales of Measurement, Organization of data, Types of class intervals, Frequency Distribution, Presentation of data, Measures of Variation, Partition values, Probability, Introduction to Probability Distribution: Binomial distribution, Poisson distribution and Normal distribution, Sampling, Introduction to Hypothesis testing, Chi-square Test

Hospital Statistics: Definition, Sources of Hospital Statistics, Important Rates, Ratio and Percentages with Formula, Uses and Limitations of Hospital Statistics, Hospital Statistics Reporting.

## **Principals of Management**

Introduction to management, Strategic Management, Foundations of Planning, Planning Tools and Techniques, Decision Making, conflict and stress management, Managing Change and Innovation, Understanding Groups and Teams, Leadership, Time Management, Cost and efficiency

## **Practical (7324)**

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## **Theory**

### **Second Year**

#### **Paper 1 : Healthcare Information Technology management (7325)**

#### **Healthcare Information Technology**

Computer Applications and Technologies in Healthcare

Office Applications - Word processor, electronic spreadsheet, database management, and presentation software programs.

Database – Definition, terms, common function, Basic data processing, Database and spreadsheet operations

Database Management System – Introduction to database management system, design, development, deployment, and evaluation of database systems, data integrity, relational normalization theory, security, privacy, and concurrence control.

Basic ICD-10 Coding - medical nomenclature and classification systems, ICD-10 structure, conventions, and guidelines for coding in hospitals and physicians offices.

Hospital Information System (HIS) , Electronic Medical Records, Personal Health Records, Telemedicine.

#### **Organizational Development and Planning in Health Information Management:**

Leadership, management, organizational structures theory, accreditation requirements, licensing regulations, and certification requirements relevant to department/organization, financial management and budgeting, Strategy development, Policy development, agendas, lead meetings, maintain documentation, and follow up, Effective communication and negotiation skills, stakeholder analysis.

## **Paper 2 : Health Information Management(7326)**

### **Health Information Management – I**

Characteristics of quality Medical Records: Medical Records for different patient encounters with health care facility, Filing Methods, Storage, and Retention, Organizational Aspects of Medical Record Department/Services, Organizational Aspects of the Centralized Admitting Services, Medical Record Department Management, Intradepartmental and Interdepartmental Relationships, Quality Management, Health Care Statistics, Quality control of Data Collection & Presentation, Nomenclatures and Classification Systems, Medico-Legal Aspects of Health Information Management.

### **Fundamentals of Management**

Introduction to Management, Principles of Management, Coordination, Planning, Decision Making, Organization, Communication, Staffing, Training and Development, Performance Appraisal, Promotions, Directing, Motivation, Counselling, Mentoring, Leadership.

### **Professional Practice in Health Information Management**

Functions and Roles, Professional Image, Inter and Intra personal relations ,Professional Issues, Communication, Technology, Time and Stress Management.

### **Health Information Management II & Nomenclature:**

Informatics and Health Information Management - Introduction, Health care delivery systems, Informatics in Health Care, Health Information Management profession, Data and formation management, Information systems Development

Aggregate Health care data - Secondary records and Health care database, Clinical classification and Terminologies, Reimbursement methodologies

Nomenclature: Introduction, Statistical classification, choosing a classification system, other classification, Encoding system.

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### **Paper 3 : Quality assurance, Financing & E.H.R (7327)**

**Quality Assurance in healthcare** – Medical Audit, Quality as a concept, Quality assurance in Hospital, Tools of evaluating quality in medical care, Barriers, Quality and customer orientation, ISO 9000 Series.

#### **Healthcare financing**

National health spending, paying for healthcare, Basics of Health Insurance, Different types of healthcare financing in India

Health insurance, Types of health insurance, Social health insurance, Health insurance in India.

#### **Electronic Health Records**

EHR – definitions, components, merits & demerits, Preliminary steps in implementation of EHR , Issues and challenges in implementation of HER, Planning for the introduction of EHR , Factors to be considered when developing EHR & implementation plan , Implementation plan, Laboratory Information system, Pharmacy Information system, Picture archiving and communication system, order sets, provider order, point of care charts, clinical decision support system

### **Practical (7328)**

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#### **Theory**

#### **Third Year**

### **Paper 1: Fundamental of Health Informatics, Clinical coding and Terminology(7329)**

#### **Fundamentals of Health Informatics & Data Security**

Introduction to health informatics: Definition, Domain, Sub-domain, Tools, Focus, Application, subject area, Aspects, & Functions Major theories such as System Theory, Information Theory, Learning Theory and Change Theory Health Informatics Literacy: Information, computer and professional literacy.

Health Information System: Definition, Purposes, Structure (operation, telecommunication, system development / project management, application support, support, network, system administration), Roles and responsibilities (CIO, Director, Manager, Supervisor, Operator, Telecommunication technician, Telecommunication Operator, System Analyst, Programmer, Consultant), Technology infrastructure (Computers, Networks, Peripherals)

Standards in Health Informatics: Standard Coordinating Group, Group formed to developed standard, Professional Organization Supporting the Development of Technical Standards, Establishing International Standards, International Standard & Committee, International Standard, Identifier Standard, General Communication Standards, Specific Communication Standards, Content and Structure Standards, Clinical Data Representation, Standard for Software Application, Telecommunication Standard.

Introduction to Health Informatics Applications: Hospital Information System, Clinical Decision Support System, eHealth, mHealth, Telemedicine.

### **International Classification of Diseases (ICD-10) and Surgical Procedures (ICD-9CM), CPT, HCPCS & SNOMED-CT:**

#### **Human Resource Management**

Management and leadership, motivation, team building, communication, productivity, performance appraisal, recruitment, job development, training, performance improvement, and revenue cycle.

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### **Paper 2 : Fundamentals of Hospital Administration, CPA & Health Insurance(7330)**

#### **Hospital Organizations and Administration and Consumer Protection Act:**

Hospital Organization and Administration : Introduction to Hospital Administration, Principles of Organizational Management , Managing People ( Human Resources ) , Clinical Services, Nursing Services and Wards, Product-based services, Diagnostic Services (Radiology, Laboratories, Blood Bank etc.), Patient Services (non-medical), Managing Support Services, Hospital Infrastructure, Hospital Information Systems, Managing the Organization. Laws relating to Hospital Administration: Structure of Indian Judicial System, Medico – legal cases, Law of Contract, Liability and Compensation, Consumer Protection Act 1986, Consent, Medical Council of India.

#### **Hospital Accounting and Financial Accounting, Health Insurance and Billing Design:**

The Nature and purpose of Accounting, Accounting Concepts & Accounting records, Preparation of various Financial Statements, Fixed assets and Depreciation, Costing and Pricing, Inventory Accounting, Analysis of Financial Statements, Financial Planning

and Control, Use of Computers in Accounting, Accounting and Audit Procedures in Health Care Sector, Health Insurance and Third Party Payers

**Paper – 3 - Medical Transcription, Telemedicine & Healthcare Policies & Standards (7331)**

**Healthcare Policies & Standards:** Health Laws, regulations, accreditation standards and certification requirement, Organizational Policy, Auditing methods and techniques, Implementation of ICT system.

**Healthcare Information Management, Medical Transcription and Telemedicine:**

Healthcare Information standards, Paper based records, Electronic Records, Ethical issues in Health Information management, Clinical quality management, Principal of management and Leadership, Project management, Strategic management, Medical Transcription – basics, objectives, rules, advantages

Telemedicine – Basics, classification, technology, objectives, rules, Telemedicine act, Merits and demerits, Future of Telemedicine, Research.

**Practical (7332)**

**Model paper**

**B.Sc HHIA- Part No**

**Name of paper –**

**Paper No**

**B.Sc. Hospital & Health Information Administration**

Part – (Main) Examination    Month Year

Attempt all questions

All the parts of one question should be answered at one place in sequential order  
Student shall be allowed to take only one supplementary copy along with one main answer  
book.

Time: Three Hours

Maximum Marks: **80**

Q. No. 1 Modified Essay Type question (Any one out of two) ----- **20**

**Q1A:**

**Q1B:**

Q. No. 2 Modified Essay Type question (Any one out of Two)----- **20**

**Q2A:**

**Q2B:**

Q. No. 3 Short Notes (Any five out of seven) ----- **5 x 8 Marks    40**

**Q3A**

**Q3B**

**Q3C**

**Q3D**

**Q3E**

**Q3F**

**Q3G**



B.Sc. Hospital & Health Information Administration  
Part – I (Main) Examination Month Year

Paper-I

**Basic of informatics**

Attempt all questions

All the parts of one question should be answered at one place in sequential order  
Student shall be allowed to take only one supplementary copy along with one main answer  
book.

**Time: Three Hours**

**Maximum Marks: 80**

Q.No.1 : Describe salient features of National Health Mission? (20)

OR

Application of Computers in Clinical setting?

Q No. 2: Define demography, explain with examples? (20)

OR

Type and process of communication?

Q. No. 3 Write short notes on: (any five) (40)

- a) Private sector in Indian healthcare system
- b) Storage devices
- c) Medical Ethics
- d) List barriers of communications
- e) Define Demography
- f) Central Processing Unit of Computers.
- g) Confidentiality as a medical ethics.

**B.Sc. Hospital & Health Information Administration**

**Part – I (Main) Examination Month Year**

**Paper II**

**Medical Terminology**

Attempt all questions

All the parts of one question should be answered at one place in sequential order  
Student shall be allowed to take only one supplementary copy along with one main answer book

**Time: Three Hours**

**Maximum Marks: 80**

Q.No.1: NABH guideline for quality improvement of infection control practice? (20)

**OR**

Explain roots, prefix and suffix with examples from respiratory system?

Q No. 2: Professional values – Integrity and Objectivity? (20)

**OR**

Summarize Medio-legal aspects of Record keeping?

Q. No. 3 Write short notes on: (any five) (40)

- a) Component of an effective infection control program
- b) Biomedical wastage
- c) Component of medical terms
- d) Anatomical position of Body
- e) Primary functions of integumentary system
- f) Ethical Values.
- g) Quality of Care.

B.Sc. Hospital & Health Information Administration

Part – I (Main) Examination Month Year

**Paper III**

**(Research methodology & Management)**

Attempt all questions

All the parts of one question should be answered at one place in sequential order  
Student shall be allowed to take only one supplementary copy along with one main answer book

**Time: Three Hours**

**Maximum Marks: 80**

Q.No.1: Types of Data, explain with example? (20)

**OR**

Explain Variables: Qualitative & Quantitative?

Q No. 2: What is sampling? Describe various sampling methods. (20)

**OR**

Define Probability and enumerate rules of Probability?

Q. No. 3 Write short notes on: (any five) (40)

- a) Statistics
- b) Biomedical wastage
- c) Scale of measurement
- d) Uses and Limitations of Hospital Statistics
- e) Research question.
- f) Planning tools & Techniques.
- g) Time management.

**B.Sc HHIA-II  
(7325)**

**Heal.inf. Tech.-I**

B.Sc. Hospital & Health Information Administration  
Part – II (Main) Examination Month Year

**Paper I**

**Healthcare Information Technology management**

Attempt all questions

All the parts of one question should be answered at one place in sequential order  
Student shall be allowed to take only one supplementary copy along with one main answer book

**Time: Three Hours**

**Maximum Marks: 80**

Q No. 1 Define and Discuss Database management System? (20)

**OR**

Computer Applications in Healthcare?

Q No. 2: Discuss in detail about strategic planning and organizational development?

**OR**

Discuss in detail about Change management? (20)

Q. No. 3 Write short notes on: (any five) (40)

- a) Organizational structures theory.
- b) Policy development
- c) Stakeholder analysis
- d) ICD 10 Coding
- e) Hospital Information system
- f) Emerging technology issues in healthcare.
- g) Effective communication and negotiation skills.

B.Sc. Hospital & Health Information Administration  
Part – 2 (Main) Examination Month Year

**Paper II**

**Health Information Management**

Attempt all questions

All the parts of one question should be answered at one place in sequential order  
Student shall be allowed to take only one supplementary copy along with one main answer  
book.

**Time: Three Hours**

**Maximum Marks: 80**

Q.No.1 Discuss characteristics of a quality medical record? (20)

**OR**

Discuss Nomenclature and Classification System?

Q No. 2: Define various levels of management and their functions? (20)

**OR**

Give definition of management and explain process of management?

Q. No. 3 Write short notes on: (any five) (40)

- a) Motivational technique.
- b) Time and stress management
- c) Quality assessment
- d) Leadership
- e) Staffing
- f) Organization
- g) Medico-legal aspect of Health Information management.

**B.Sc HHIA-II**  
**(7327)**

**QA.Fin & EHR-III**

**B.Sc. Hospital & Health Information Administration**  
**Part – II (Main) Examination Month Year**  
**Paper III**

**Quality assurance, Financing & E.H.R**

Attempt all questions

All the parts of one question should be answered at one place in sequential order  
Student shall be allowed to take only one supplementary copy along with one main answer  
book.

**Time: Three Hours**

**Maximum Marks: 80**

Q.No.1 Define Electronic Health Record. Enumerate component of  
Electronic Health Records (20)

**OR**

Discuss advantages and disadvantages of E.H.R?

Q No. 2: Discuss about quality assurance in healthcare? (20)

**OR**

Discuss about different types of healthcare financing in India?

Q. No. 3 Write short notes on: (any five) (40)

- a) National health spending.
- b) Basics of health insurance
- c) Evidence based medicine
- d) Risk adjustment
- e) Clinical decision support
- f) Implementation of E.H.R.
- g) Utility assessment.

**B.Sc HHIA-III  
(7329)**

**F of HI ,C-Term.-I**

B.Sc. Hospital & Health Information Administration

Part – 3 (Main) Examination Month Year

**Paper I**

**Fundamental of Health Informatics, Clinical coding and Terminology**

Attempt all questions

All the parts of one question should be answered at one place in sequential order  
Student shall be allowed to take only one supplementary copy along with one main answer  
book.

**Time: Three Hours**

**Maximum Marks: 80**

Q.No.1 Discuss in detail- Standard in Health Informatics? (20)

**OR**

Define and discuss Clinical Decision Support System?

Q No. 2: Define medical Terminology. Mention salient features of ICD 10 Coding? (20)

**OR**

SNOMED CT and its use in Healthcare setting?

Q. No. 3 Write short notes on: (any five) (40)

- a) Systems Theory.
- b) Current Procedural Terminology
- c) Health Information System
- d) eHealth
- e) Information needs and challenges in Healthcare
- f) Professional development.
- g) Principles of Human resource management.

**(7330)**

B.Sc. Hospital & Health Information Administration

Part – 3 (Main) Examination Month Year

**Paper II**

**Fundamentals of Hospital Administration, CPA &, Health Insurance**

Attempt all questions

All the parts of one question should be answered at one place in sequential order  
Student shall be allowed to take only one supplementary copy along with one main answer  
book.

**Time: Three Hours**

**Maximum Marks: 80**

Q.No.1 Discuss clinical department and services in a tertiary care hospital? (20)

**OR**

Discuss Support services in a Hospital environment?

Q No. 2: Consumer Protection act? (20)

**OR**

Medical Negligence?

Q. No. 3 Write short notes on: (any five) (40)

- a) Types of Account.
- b) Trial Balance
- c) Fixed Assets and Depreciation
- d) Financial accounting Vs. Cost accounting
- e) Budgets and budgetary control
- f) Health Insurance in India
- g) Balance sheet.



**B.Sc HHIA-III  
(7331)**

**MT & TM.-III**

B.Sc. Hospital & Health Information Administration

Part – 3 (Main) Examination Month Year

**Paper III**

**Medical Transcription, Telemedicine & Healthcare Policies & Standards**

Attempt all questions

All the parts of one question should be answered at one place in sequential order  
Student shall be allowed to take only one supplementary copy along with one main answer  
book.

**Time: Three Hours**

**Maximum Marks: 80**

Q.No.1 Home Healthcare through Telemedicine? (20)

**OR**

Objectives, rules and advantages of Medical Transcription?

Q No. 2: Define Telemedicine. Advantages and disadvantages of Telemedicine in India? (20)

**OR**

Ethical issues in Health Information Management?

Q. No. 3 Write short notes on: (any five) (40)

- a) ICT system standard in India.
- b) Role of Telemedicine in rural India
- c) Virtual diabetic clinic
- d) Technology of Telemedicine
- e) Legal implications of Telemedicine
- f) Paper based clinical records.
- g) Project management.