

# **Government of Karnataka**



## **PARA MEDICAL BOARD**

**Revised Syllabus**

**of**

**II & III Year Diploma in Medical Record  
Courses**

**(Previously first/second year certificate course /  
I year DMRT/II DMRT)**

**2017**

**Second Year Diploma in Medical Records Technology**  
**(II DMRT)**  
**Medical Record Science**

**SECTION-A**

**Q P Code: 5141**

1. Orientation of entire Hospital including Medical Records Department.
2. The History of Medical Records as a whole in brief.
3. The History of Medical Records of India.
4. Identification of Patients at O.P. Registration Counter.
5. Organization of Admitting Services: out-patient, EMS, in-patient.
6. Admitting the Patients to the concerned services at In-Patient Counter.  
Patients visit II time to the hospital for treatment at Repeaters Counter.
7. The importance of Reception Counter.
8. The collection of Hospital's Daily In-Patients' Census Reports of all the wards and the duties and responsibilities.
9. a) Special Record Forms.  
b) The Basic Medical Records forms used at O.P.& I.P. Registration  
c) Forms used in all the services and concerned wards of the hospital.  
d) The flow of Medical Records in the Medical Records Dept.
10. Arranging of Medical Record forms at the time of Assembling the Records.
11. Forms Control while issuing on Indent.
13. Standardization of Forms, Printing & Quality of Paper.
14. The purpose and uses of Medical Records.
15. The values of Medical Records to Doctors, Patients, Hospital, Hospital Management on Research & teaching the Students
16. The Qualitative & Quantitative analysis of Medical Records.
17. The Medical Records Numbering System.
18. The Medical Records Filing System.
19. The requirements of equipments, furniture and others.
20. The Responsibility for Medical Records Professionals.
21. The formation & functions of:-
  - (1) Medical Record Committee,
  - (2) Medical Record Audit Committee and
  - (3) Morbidity and Mortality Committee.
22. Retention of Medical Records in detail.
23. Maintenance of (1) Patient Index Card/Patient Identity Card,
  - (2) Patient Alpha Index Card,
  - (3) Diagnostic/Disease Index Card

- (4) Operation Index Card.
- (5) Physician/Surgeons' Index Card,
- 24. Maintenance of (1) Admission Register, (2) O.P.Registration
- (3) Birth Register (4) Death Register
- (5) Accident Register (6) Operation Reg.
- (7) Inventory Register. (8)Forms Stock Reg

### SECTION -B

**Q P Code: 5142**

25. Organization and Management of Medical Records Department.

26. Functions of Medical Records Department which includes:-

- |                                     |                                       |
|-------------------------------------|---------------------------------------|
| 1. I.P.Daily Census Report          | 7. Diagnostic/Disease <b>Indexing</b> |
| 2. Accession Reg. Maintenance       | 8. Issuing Forms & Registers          |
| 3. Assembling the Records.          | 9. Hospital Statistics Maintenance    |
| 4. Complete Incomplete Rds.Control  | 10. Birth and Death Maintenance.      |
| 5. Discharge Analysis               | 11. Maintenance of MLC Records.       |
| 6. <b>Coding</b> Diagnosis/Diseases | 12. Filing the Records.               |

27. Formalities to be observed before issuing of all kinds of Certificates like O.P. Attendance, In-Patient, Admission & Discharge, Admission & Discharge Against Medical Advice, Rest, Fitness, Physical Fitness, Wound Certificate, Birth and Death.

28. Importance and Functions of MRD.

29. Necessary rules and regulations on the Registration of Birth and Death Reports

Registration of Births and Deaths act 1969 and also according to the Mysore Registration on Births and Deaths & Rules 1970.

- a) Collection of Birth & Death Case Records.
- b) Follow up the procedure in MRD
- c) Writing the Birth & Death register with the help of Case Record.
- d) Birth and Death Reports to the Municipality/Corporation.
- e) Sending the Cause of Death Reports to the Central Station.
- f) Delay in sending the Birth & Death reports rules & regulations.
- g) District Statistical Department concerned to MRD.

30. Formalities in of issue of 'Corrigendum' in case of General

Cases Or Medico Legal Cases: Supporters:- 1.Ration Card,

2. Electoral List from Revenue Dept. and An affidavit from the Court.

31. Others:-Active Records, In-active Records, Tracer Cards, Personal & Impersonal Document,
32. The Medical Records are retrieved from the racks for Group-Study by the Under Graduate or Post Graduate Students.
33. Inter Departmental Relationship as far as records concerned.
34. Office procedure & maintenance of Medical Records.
35. Brief explanation about the ICD.

## **MEDICO LEGAL ASPECTS CONCERNED WITH RECORDS**

### 1. Indian Penal Code:

Definition, Title and extent of operation of the Code, Punishment of offences committed within India, Punishment of offences committed beyond, but which

by law may be tried within, India, Extension of Code to extra-territorial offences. "Man" "Woman" "Person" "Public" "Servant of Government" 'Govt.'

"Judge", "Court of Justice", "Public servant", "Counterfeit", "Document", "A will", "Act" "Omission", "Voluntarily", "Offence", "public servant", "Destruction of document to prevent its production as evidence",

### 2. Indian Evidence Act: 1872:

Short title, extent and commencement: "Court", "Fact", "Relevant", "Facts in issue", "Document", "Evidence", "Proved" "Disproved", "Not Proved", Judicial

Notive, Examination of witness., Cross Examination., Re-examint., "Public Documents", "Private document", "Certified copies of public documents", "Proof of documents by production of certified copies", "Estoppel",

### 3. The code of criminal procedure: 1973.

Short title, extent & commencement: definitions, High Court, D

Definitions: "Cognizable", "Non-Cognizable", "bailable offence", "non-bailable offence", "charge", "complaint", "inquiry", "trial", "investigation", "judicial proceedings", "Court", "pleader", "police report", "police station", "public prosecutor", "Assistant Public

Prosecutors”, “When the police may arrest without warrant”. Arrest by Magistrate”, “protection of Members of the armed forces from Arrest”., “Search of place entered by persons to be arrested”, “Arrests how made”, “Rights of arrest”, “Right to be informed of right bail”., “Right to be produced before a Magistrate without delay”:, “Right of being detained for more than 24 hours without Judicial Scrutiny”, “Right to consult a legal practitioner”., “Right of an arrested indigent person free legal aid and to informed about it”., “Right to be examined by a Medical Practitioner”., “Confession”., “Process to compelled Appearance: Section 61,62,63,64,65,66,67,68 & 69.”, “Warrant of Arrest., Sec.70,71,72,73, 74, 75, 76, 77, 78, 79, 80, & 81”, “Proclamation and attachment : Sec.82, 83, 84, 85”, “Process to compel production of things: Sec.91., 92., 93, 95, 96, 97, 98, & 154(FIR)”. “Form of Summons”, “Summons how served”, “Summons to produce document or other things”, “Discharge of person informed against”,

#### 4. Release of Information of the Medical Records:-

- |               |                           |
|---------------|---------------------------|
| a) Government | e) Convictors in the Jail |
| b) Patient    | f) Advocates              |
| c) Insurance  | g)Third Party             |
| d) Police     |                           |

#### 5. Medico Legal Cases:-

- |                       |                               |
|-----------------------|-------------------------------|
| 1. Accident Registers | 5. Age Examination            |
| 2. Wound Certificates | 6. Examination of the Injured |
| 3. Sexual Offences    | 7. Examination of the Custody |
| 4. Impotency Cases    | 8. Production to the Court    |

# **PRACTICAL WORK IN MEDICAL RECORDS**

## Paper – II

### RECORD MAINTENANCE AND PRACTICAL WORK

1. O.P. Registration
2. O.P. Registration for Repeaters(old patients)
3. I.P. Registration.
  - a) Collection of data for admission
  - b) Issue of Patient Index Card (Identity)
  - c) Preparation of Master Index Card.
  - d) Preparation of IP folders.
4. Daily In-Patients Census Collection from the Wards
5. Entry in the Census Register and its maintenance.
6. Maintenance of Accession Register.
7. Assembling the Records.
8. Making Deficiency Check List.
9. Complete and Incomplete Records Control.
10. Discharge Analysis.
11. Coding the Diseases.
12. Indexing in the Cards.
13. Generation of Hospital's Biostatistics.
  - a) OP Statistics.
  - b) IP Statistics.
  - c) No. of Beds Sanctioned
  - d) No. of Beds Commissioned.
  - e) Bed Occupancy in %
    - 1) Service wise.
    - 2) Unit wise.
    - 3) Ward wise.
14. The registration rules for births and deaths as per the act 1969 and also Mysore registration of Births and Deaths act 1970.
15. Maintenance of Birth, Still Birth and Death Registers.
16. Sending of Birth, Still Birth, & Death Reports to the Municipality, Corporation & Cause of Death to Bangalore.
17. Dealing with the Accident Register, Issue of Wound Certificate, Brought Death Reg. & its correspondence.
18. Dealing with the Certificates of Rest, Fitness, O.P. Attendance, In-Patient, Admission and Discharge, Admission & Discharged on AMA, Disability, Age

- Certificates and etc.,  
19.Maintenance of Stock of Registers and Forms.  
20.Equipments required to the MRD for the maintenance of  
Medical Records.

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## **THEORY EXAMINATION – 100 MARKS**

### **Section A. : 50 Marks**

#### **I. Short Notes:**

5marks X 4 questions = 20 marks (Answer any 4 out of 5 questions)

#### **II. Short Answers:**

3 marks X 10 questions = 30 marks (Answer All 10 Questions)

### **Section B. : 50 Marks**

#### **I. Short Notes:**

5 marks X 4 questions = 20 marks (Answer any 4 out of 5 questions)

#### **II. Short Answers:**

3 marks X 10 questions = 30 marks (Answer All 10 Questions)

Practicals 100 marks

Pattern of Practicals :

10 spotters 2 mark each - 20 marks ( 2 mins each)

Two special procedures to be described 30 marks each – 60 marks ( I hour)

Practical Record -10 marks

Viva voce -10 marks

# Second Year Diploma in Medical Records Technology

(II-DMRT)

SUBJECT: ANATOMY

SECTION-A

Q P Code: 5143

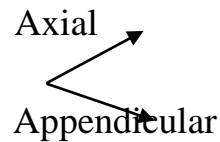
1. Introduction to Anatomy:

a. Definition of Anatomy

b. Anatomical position

- Supine, prone, lithotomy → positions

c. Different parts of human body:



→Head and neck, Thorax and abdomen, pelvis and perineum, upper and lower limbs.

d. Anatomical planes and sections: Median, sagittal, coronal, transverse, longitudinal, horizontal, oblique.

e. Anatomical terms:

Anterior, posterior, superior, inferior, medial, lateral, proximal, distal, superficial, deep, ventral, dorsal, cephalic, caudal, interior, exterior, invagination, evagination, ipsilateral, contralateral.

f. Terms for describing muscles:

Origin, insertion, Belly, tendon, aponeurosis, raphe.

g. Anatomical movement:

Flexion, extension, adduction, abduction, Medial rotation, lateral rotation, circumduction, pronation, supination, protraction, retraction, elevation, depression.

2. Basic tissues: Definitions of

Epithelium, connective tissue (including cartilage and bone), muscle, nerve.

3. Skeletal System: → Parts of a young long bone.(epiphysis, diaphysis, metaphysis)



Types and number of bones: Identification of each bone with its major features (ex: Femur with its upper end, lower end, shaft, trochanters, condyles, linea aspera etc)

#### Radiological anatomy with radiograms

Arthrology and kinesiology in detail with classification of Joints and study of large synovial joints, their parts, movements (shoulder, elbow, wrist, Hip, Knee, Ankle & T.M. Joints)

#### 4. Anatomy of Thorax

Thoracic cage → Types

Diaphragm, vertebral column.

#### 5. Skull as a whole with different views

#### 6. Systemic Anatomy:

The student should be able to identify and understand the anatomical components of each system with functional co-relation. (Diagrams, models, specimens from the dissected cadavers and colour photographs, 2D and 3D animation techniques can be used to teach.)

7. G.I.T –salivary glands, tongue, epiglottis, pharynx,oesophagus,stomach,duodenum,jejunum,ileum,ileocaecal junction,caecum,appendix, ascending colon, transverse colon, descending colon,rectum,anal canal, peritoneum,liver gall bladder,pancreas .

8. Nervous system –Cerebrum, Cerebellum, Mid Brain,Pons Medulla Oblongata,Spinal Cord,Cranial And Peripheral Nerves and Ventricles, Autonomic Nervous System With Brief Functional Correlation.

9. CVS-Heart ,Arterial And Venous Systems[ Systemic And Portal ].

10. Lymphatic system –Lymph Vessels, Lymph Nodes, Thoracic duct,spleen,tonsils,thymus and general arrangement of lymphatic system with functional correlation.

11. Endocrine system- Hypothalamus,Pituitary,Thyroid, Parathyroid,Adrenal And Pancreas.

12.Urinary system –Kidney, Ureter, Urinary Bladder, Urethra.

13. Reproductive systems
14. Integumentary system including mammary gland.
15. Respiratory system –nasal cavity, paranasal air sinuses, larynx ,trachea, lungs.
16. Mediastinum and diaphragm.
17. Organs of Special senses.

## **Practicals**

The students should maintain practical records and submit the same to the HOD of Anatomy for scrutiny.

Basic tissues to be demonstrated for identification.

1. Identification of each bone in the body → demonstration and understanding of major features of bones, under the following.
  - i. Appendicular skeleton
  - ii. Axial skeleton
2. Identification of each joint in the body with demonstration and understanding of bones forming the joints.
3. Radiological anatomy of bones and joints studied under 1 & 2.
4. Identification and surface anatomy of organs and tissues studied under theory→ system-wise study and their functions in brief.
5. Study of upper and lower limbs  
With identification only of muscles, vessels, nerves and modifications of deep fascia like **retinaculum**.

With each practical class, spellings of anatomical names of structures are to be understood and written properly by the student.

## **SECTION-B**

**Q P Code: 5144**

### **GENERAL PHYSIOLOGY (Duration of Teaching - 3 Hrs)**

#### **Introduction:-**

Physiology - Homeostasis

#### **Cell:-**

Structure of a Cell, An overview of Intracellular Organelles, Cell Junctions, Stem Cells, Cell Aging & Death

#### **Transport across cell membranes:-**

Mechanisms of Transport across Cell Membrane

#### **Body Fluids:-**

An overview of Compartments of Body Fluid.

### **BLOOD (Duration of Teaching - 7 Hrs)**

#### **Composition & Functions of Blood**

##### **Plasma:-**

Composition and Functions Of Plasma Proteins

##### **Cellular Components of Blood:-**

(RBC, WBC, PLATELETS) Morphology, Physiological Values, Functions, Overview of Haemopoiesis, Life Span & Applied Aspects

##### **Hemoglobin:-**

Definition of Hemoglobin, Functions, Physiological Values, Fate of Haemoglobin, Applied Aspects

**ESR, PCV, Blood Indices & Anemia, Polycythemia.**

##### **Blood Groups:-**

ABO Blood Grouping, Rh Typing, Landsteiner's Law, Cross Matching, Storage of Blood, Indications and Contraindications of Blood Transfusion.

##### **Homeostasis:-**

Clotting Factors, Types of Clotting mechanisms, Anticoagulants, Applied Aspects, Bleeding time, Clotting time, Prothrombin time

## **NERVE PHYSIOLOGY (Duration of Teaching – 3 Hrs)**

### **Nerve:-**

Structure, Types of Neuralgia Cells, Functions Of Nerves

### **Receptors:-**

Definition, Types of Sensory Receptors.

### **Reflex:-**

Arc, Action & Reflexes.

### **Autonomic Nervous System:-**

Organization and Functions

## **Synapse & Neuromuscular Junction**

## **MUSCULOSKELETAL SYSTEM (Duration of Teaching - 2 Hrs)**

Types of Muscle, Muscle Spindle, Physiology of Muscle Contraction. **Applied Aspects**

## **GASTROINTESTINAL PHYSIOLOGY (Duration of Teaching – 4 hrs)**

**Structural Overview:** Of Gastrointestinal Tract

Movements of GIT

Salivary Glands- Its Secretions and Functions,

Hepatobiliary System - Secretions and Its Functions

Pancreatic - Secretions and Its Functions

Intestinal- Secretions and functions

Applied Aspects In GIT.

Defecation

## **THE CARDIOVASCULAR SYSTEM (Duration of Teaching - 3 Hrs)**

Overview of structure of Heart, Conducting System Of Heart, Systemic And Pulmonary Circulation, Over View -Heart Rate, Stroke Volume, Cardiac Output, Heart Sounds, Pulse, BP & Definition of ECG and Recording of ECG.

## **RESPIRATORY SYSTEM (Duration of Teaching - 3 Hrs)**

An Overview of respiratory system: air way anatomy, muscles of ventilation, Functions of respiratory system, ventilation: exchange & transport of respiratory gases, compliance, surfactant.

**Applied aspects:-**

Artificial respiration, hypoxia, Definition of Apnea, Dyspnea, and Tachypnea.

**RENAL SYSTEM (Duration of Teaching - 3 Hrs)**

Overview of Anatomy of kidneys, renal blood flow, structure of Nephrons.

Renal and non renal functions of kidney

General principles of formation of urine, GFR, estimation of GFR

Normal constituents of Urine.

Renal function tests.

**ENDOCRINE SYSTEM (Duration of Teaching - 3 Hrs)**

**Over view of endocrine system;** hypothalamic hormones, Functions and applied aspects, hormonal regulation by positive and negative feedback mechanism of Anterior & Posterior Pituitary Hormones, Thyroid Hormones, Parathyroid Hormones, Pancreatic Hormones, Adrenal Cortical Hormones.

**REPRODUCTIVE SYSTEM (Duration of Teaching - 3 Hrs)**

**Over view:-**

Male And Female Reproductive System Functions of Male and Female Gonads, Menstrual Cycle

Oogenesis and Spermatogenesis, Fertilization, Implantation and Parturition,

Male Reproductive Hormones It Functions & Cryptorchidism

Female Reproductive Hormones and Its Functions,

Pregnancy Tests and Contraceptive Methods in Male and Females, Lactation.

**SKIN (Duration of Teaching - 2 Hrs)**

Functions of skin

Vitamin D synthesis

Temperature regulation

**CNS & SPECIAL SENSES (Duration of Teaching - 4 Hrs)**

Functional Organization of Brain, Spinal Cord & Its Functions, Cranial and Spinal Nerves.

CSF Composition and Functions.

**Vision: -**

Structure And Functions of Eye Ball, And Errors of Refraction And Correction.

**Hearing:-**

Structure and Function Of Ear, Audiometry.

**Taste: -**

Taste Buds, Primary Taste sensation

**Smell:**

Olfactory pathway

**SECTION –C**

**Q P Code: 5145**

## **PATHOLOGY AND MICROBIOLOGY**

1. Introduction to Pathology & Various branches of Pathology
2. Definitions and terms used in Pathology – with examples. Cell injury – hyperplasia, Hypertrophy, Hypoplasia and atrophy – Inflammation and repair - Definition, Types with examples,

### **Healing of fractures, Callus**

Haemodynamic changes – Edema, Thrombosis, Embolism, Infarction, Necrosis and Gangrene – Definitions, Types and examples.

- Neoplasia – Definition, Types with examples, characters of Benign and Malignant tumours.
- Nutritional disorders – causes and deficiency diseases – Vitamin – A,B,C and D – Kwashiorkar, Marasmus and Obesity.

### **3. Systemic Pathology**

- a. Diseases of the Bone** – Osteomyelitis – Type and examples Syquestrum, Involucrum, cold abscess, Pyogenic abscess, Osteopetrosis, Arthritis (Stress on Rheumatoid and Osteoarthritis) and Fractures- Definitions & Examples.

**Brief account on Tuberculosis of Bone and Spine, Tumours** –

Osteochondroma.

- b. Diseases of the Lung** – Pneumonia, Pleural effusion, Emphysema – **Definitions, Types and Examples.**

Brief note on TB Lung including primary complex, Lung tumours (Bronchogenic Carcinoma )

- c.** Diseases of Paranasal Sinuses – Sinusitis, Epistaxis – Cause, Nasal Polyps
- d.** Renal System – Congenital anomalies, Calculus, Hydronephrosis Tumours of the kidney and Bladder.
- e.** GIT – Achalasia cardia, Hiatus hernia, Causes of stenosis and Strictures of Oesophagus, Ca oesophagus, Gastric ulcer, Ca Stomach Duodenal ulcer, Pyloric stenosis, Leather bottle stomach, Ca Colon, Clcers in the intestines
- f.** Liver & Gall Bladder – Gall Stones, Cholecystitis, Fatty liver, Cirrhosis, Ca Liver – Definition and brief account.
- g. Cardiovascular System** – Rheumatic heart disease, Myocardial infarction, Aneurysm of aorta, Pericardial effusion, causes of Cardiomegaly.

**h. Thyroid** – Goiter, Thyrotoxicosis – Definition causes and types  
- **Carcinoma of Thyroid** - Names

**i. Breast** – Fibroadenoma, Phylloides tumour, **Carcinoma** Breast, - Brief account.

**j. Female Genital Tract** – Fibroid uterus, Ovarian tumours, **Carcinoma** Cervix and **Endometrium** – Brief account.

**NOTE:**Above mentioned topics should be covered briefly with definitions, types and examples of the lesion wherever necessary.

## **SUBJECT- MICROBIOLOGY**

10 hrs

- Importance of Microbiology & relation to maintenance of medical record.
- Names of the organisms – Bacteria
- Names of the organisms – Viruses
- Names of the organisms – Fungi
- Names of the organisms – Parasitology
- Names of common infectious diseases.
- Investigations done in microbiology

### **Examination Pattern:**

Theory Max 100 marks (Part A-40 marks, Part B-30 marks & Part C-30 marks)

#### **PART-A**

- Short notes- answer any two       $2*5=10$ marks
- Short answers       $10*3=30$  marks
- Total      40 marks

#### **PART-B**

- Short notes- answer any three       $3*5=15$ marks
- Short answers       $5*3=15$  marks
- Total      30 marks

#### **PART-B & C**

- Short notes- answer any three       $3*5=15$ marks
- Short answers       $5*3=15$  marks
- Total      30 marks

# **HOSPITAL BIOSTATISTICS**

**SECTION-A**

**Q P Code: 5146**

**1. Introduction and Definition**

Statistics, Biostatistics, Hospital Statistics, Vital Statistics

**2. Sources**

Statistics, Biostatistics, Hospital Statistics, Vital Statistics

**3. Methods of collection of data**

Primary Data, Secondary Data

**4. Classification, tabulation and presentation**

Objectives, Parts Of Table, Rules Of Table, Type Of Diagrams, Advantages, Limitations

**5. Measures of tendency**

Objectives, Mean, Median, Mode

**6. Methods of dispersion**

Range, Mean Deviation, Standard Deviation

**7. Methods of sampling**

Simple sampling

Random sampling

Systematic sampling

Stratified sampling

Merits and demerits

Co-relation

Regression

**8. Vital biostatistics**

**9. Compilation and analysis of hospital statistics and services**

**10. Hospital definitions:**

Census, daily inpatient census, hospital patient, hospital inpatient, hospital newborn patient, inpatient admission, inpatient discharge, live birth, hospital live birth, foetal death, hospital foetal death, transfer, discharge transfer etc.



## **11. Terms and definitions related to beds, facilities and various units:**

Unit, hospital bed, inpatient bed, adult bed, child bed, new born beds / bassinets, inpatient care unit, clinical care unit, medical staff unit etc.

## **12. Terms involving the counts made and averages and ratios derived from the above terms:**

Average daily census, percentage of occupancy, inpatient bed occupancy ratio, inpatient bed count, inpatient bed count day, inpatient bed count days (total), inpatient service day, inpatient service days, hospital inpatient bed capacity, adult bed capacity, child bed capacity, newborn bed capacity etc.

## **13. Common hospital rates and ratios & percentages:**

Rate, ration, percentage, death rate, hospital death rate, net death rate, anaesthesia rate, maternal death rate, foetal death, perinatal death rate, net autopsy rate, bed occupancy rate, length of stay etc.

## **14. Method of collection and compilation of hospital statistics**

## **15. Comparison study of other hospital or PHC etc.**

## **16. Presentation of compiled hospital statistics**

Introduction of hospital's biostatistics

1 Definition of hospital's biostatistics

2 Sources of hospital's biostatistics

3 Sources to generate

4 Methods of collection

5 Tabulation

6 Presentation

7 Measures of tendency

8 Method of dispersion

9 Sampling:

- Simple sampling

- Random sampling

- Systematic sampling

- Co-relation

- Regression

10 Vital biostatistics

**SECTION-B**

**Q P Code: 5147**

11 Analysis of hospital services and discharges

12 Indices (BOR, Average LOS, TOI, Death and Birth rate)

13 Method of compilation

14 Correlation between hospital and primary health centre

15 Uses of hospital biostatistics

16 Collection of hospital's biostatistics

17 Presentation of hospital's biostatistics to:

- The government

- The hospital administrator

18 Hospital biostatistics sums (problems) of related services, for example general laboratories, biochemistry, pathology, microbiology and also major operations

**Examination Pattern:**

Theory Max 100 marks(Part A-50 marks & Part B-50 marks)

- |                                 |               |
|---------------------------------|---------------|
| 1. Short notes- answer any four | 4*5=20marks   |
| 2. Short answers                | 10*3=30 marks |
| Total                           | 50 marks      |

The Medical Record Sciences and Medico Legal Aspects are to be combined together in one question paper by allotting 60 marks to Medical Record Sciences and 30 marks to Medical Legal Aspect. The student should score 25 marks in MRSc & 15 marks in ML Aspect to get pass. The Internal Assessment marks should be 7 for MRSc., & for ML Aspects should be 3. So that every student will give more attention on MRSc. & ML Aspects, otherwise they will give more attention towards only MRSc, and neglect towards ML Aspects. ML Aspects is one which is essentially required to the medical record personals to know for attended to the Court evidences and RTA, and other "medico-legal formalities in order to render good medical record practice when qualified."

| <b>Paper</b> | <b>SUBJECT</b>               | <b>SECTION</b> | <b>Question paper Code</b> | <b>MAX. MARKS</b> |
|--------------|------------------------------|----------------|----------------------------|-------------------|
| Paper 1      | MRS (Medical Record Science) | Section A      | <b>5141</b>                | 50                |
|              |                              | Section B      | <b>5142</b>                | 50                |
|              | Practical                    |                |                            | 100               |
| Paper 2      | Anatomy                      | Section A      | <b>5143</b>                | 40                |
|              | General Physiology           | Section B      | <b>5144</b>                | 30                |
|              | Pathology & Micro.           | Section C      | <b>5145</b>                | 30                |
| Paper 3      | Hospital & Biostatistics     | Section A      | <b>5146</b>                | 50                |
|              |                              | Section B      | <b>5147</b>                | 50                |

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**Third Year Diploma in Medical Records Technology (III DMRT)**

**MEDICAL TERMINOLOGY**

**SECTION-A**

**Q P Code: 6141**

1. Introduction on ISCD & RHP-10<sup>th</sup>.Edition.
2. An explanation in brief on Vol.I, II, III
3. A detail study on the following diseases;-
  - a) Prefix, Suffix and Routes
  - b) Bones and Joints
  - c) Muscles, Tendons, Fascial and Ligaments.
  - d) Respiratory System.
  - e) Digestive System.
  - f) Cardio Vascular System & Lymphatic System.
  - g) Endocrine Glands & Metabolism.
  - h) Urogenital System.
  - i) Ophthalmic, Ear and Psychiatric terms.
  - j) Reproductive System, Obstetrics, Gynecology and Neonatal.
  - k) Human Body .

**4. Phobias:-**

|                   |                     |
|-------------------|---------------------|
| 1) Acrophobia     | 16) Erythrophobia   |
| 2) Angliophobia   | 17) Kynophobia      |
| 3) Androphobia.   | 18) Necrophobia     |
| 4) Bathophobia.   | 19) Noctiphobia.    |
| 5) Bibliophobia   | 20) Olphactophobia. |
| 6) Claustrophobia | 21) Pedicolophobia. |
| 7) Demophobia.    | 22) Pharmacophobia. |
| 8) Electrophobia. | 23) Photophobia.    |
| 9) Gamophobia     | 24) Phthisiophobia. |
| 10) Genophobia.   | 25) Pyrophobia.     |
| 11) Haemiophobia. | 26) Toxiphobia      |
| 12) Hydrophobia.  | 27) Tonitrophobia.  |
| 13) Cynophobia.   | 28) Verbophobia.    |
| 14) Dipsophobia.  | 29) Xanthophobia.   |
| 15) Dysmorphobia  | 30) Zoophobia.      |

**Section- B**

**Q P Code: 6142**

**II. Coding the Diseases and Operations:-**

- 1) Introduction of ISCD & RHP – 10<sup>th</sup>. Edition.
- 2) History of International Classification of Diseases.
- 3) Code Numbers to the Diseases & Operations.
- 4) Code Numbers to the More than one Diagnosis and Operations.
- 5) Indexing the diagnosis/Operation in Card or in System.
- 6) Conventions (symbols) used in the Index.
- 7) The guidelines for certification and rules for coding.
- 8) The special tabulation list for mortality & Morbidity.

**PRACTICAL WORK IN HOSPITAL STATISTICS**

**Report generation and maintenance and practical work in medical records department**

Generation of hospital's biostatistics:

- I. OP statistics (new and old), sex wise, department wise : daily, monthly, annually
- II. IP statistics, admission, discharge, sex wise, department wise : daily, monthly, annually
- III. Length of stay, percentage of bed occupancy, mortality and morbidity rates, birth rate, infection rate

Monthly reports: communicable and non communicable, GE cases, mental health mch, RCH, HIMS, patients category wise report, geriatrics report, burns and super specialty care report, disability report, SNCU, NRC etc.

**Examination Pattern:**

Theory Max 100 marks(Part A-50 marks & Part B-50 marks)

- |                                 |               |
|---------------------------------|---------------|
| 1. Short notes- answer any four | 4*5=20marks   |
| 2. Short answers                | 10*3=30 marks |
| Total                           | 50 marks      |

# HOSPITAL ADMINISTRATION

## SECTION-A

Q P Code: 6143

**No. of lecturer hours: 100 hrs**

### **Learning objectives:**

1. Introduction
  - General introduction
  - History of hospitals
  - History of hospitals in India
  - Definition of hospitals
  - Functions of hospitals
  - Classification of hospitals
2. General principles of management:
  - Planning
  - Organizing
  - Staffing
  - Budgeting
  - Co-ordination
3. Building structure of the hospital
  - More space around the hospital
  - OPD building with all the facilities
    - Reception
    - OP Registration
    - IP Registration
    - Required essential equipments, furniture and services to exam the patients
    - Blood bank
    - Central laboratory: pathology, biochemistry, microbiology
    - Casualty and emergency services
    - Minor OT
    - Emergency ward
    - Radiology: X-ray, ultrasound, CT scan, MRI
    - Physiotherapy unit
  - IPD building with all facilities

- General wards
- Major OT
- Labour room
- ICU, SICU, NICU, PICU, RICU, ICCU
- Clinical laboratories
- Special wards
- Post operative ward
- Burn and trauma ward
- Convict ward
- Postmortem
- Mortuary
- Dhobi laundry
- Kitchen unit
- Reading room
- Police out post
- Electric generator
- Medical records department

### **Section-B**

**Q P Code: 6144**

#### 4. Hierarchy in hospital administration

- Medical superintendant
- Asst. medical superintendant
- Asst. administrative officer
- Chief administrative officer
- Resident medical officer
- Chief pharmacist
- Medical record officer
- Nursing superintendant (matron)
- Physiotherapist
- Dietician
- Electrician
- Plumber
- Dhobi
- Group – D officials

5. The duties and responsibilities of the following:

- Medical superintendent
- Asst. medical superintendent
- Asst. administrative officer
- Chief administrative officer
- Resident medical officer
- Chief pharmacist
- Medical record officer
- Nursing superintendent (matron)
- Physiotherapist
- Dietician
- Electrician
- Plumber
- Dhobi
- Group – D officials

**Examination Pattern:**

Theory Max 100 marks(Part A-50 marks & Part B-50 marks)

- |                                 |               |
|---------------------------------|---------------|
| 1. Short notes- answer any four | 4*5=20marks   |
| 2. Short answers                | 10*3=30 marks |
| Total                           | 50 marks      |



# Computer Science

**Q P Code: 6145**

- 1) Basic computer concepts which includes the Microsoft Words, Excel, PowerPoint.
- 2) Use of computer in hospitals which includes all the wards, services, I.P. Registration, O.P. Registration and Medical Records Department.
- 3) Preparation of Discharge Summary and Lab Reports, Radiology Reports.
- 4) Preparation of Hospital Statistics, Graphical Presentation.

# Surgical Coding

**Q P Code: 6146**

International classification of diseases and operations coding.

Knowledge of coding of diseases and operations is essential to achieve accuracy in compilation of Medical statistics, which are frequently utilised for teaching and research purposes.

1. History of international classification
2. Introduction to vol. Nos. 1 and 3 of International classification of diseases, injuries (legal and medical) and causes of death. ICD - 10.
3. Medical certification and rules for classification.
4. Uses of special tabulation list of morbidity and mortality.
5. Introduction to adopted edition of vol.I & II of ICD for coding of operative procedure.
6. Medical & surgical coding as per ICD 10.

## **Question Paper Pattern**

**ANSWER ANY TEN QUESTIONS**

**10X3= 30**

## EDUCATIONAL STUDY TOUR AND PROJECT REPORT

To gain more knowledge rather than what such students have observed and studied in the training centers, from the patient records maintained by in different hospital of Karnataka State for which the Educational Study Tour to the final year students is essential and the study tour is to be conducted during the end of the month of June or July of the year compulsorily to the following categorized hospitals:-

- |                          |       |
|--------------------------|-------|
| 1) Primary Health Centre | = One |
| 2) District Hospitals    | = Two |
| 3) Teaching Hospitals    | = Two |

The study tour visit made to each hospital will carry 10+30+50 marks, in total 90 marks.

The Medical Record Officer or in charge of Medical Records Department or training centers should obtain the declaration from the students before proceeding to the study tour. The declaration should be stated that they are proceeding to study tour on their (students) own risk and responsibility. The signature of the candidate and parent is to be taken well in advance and filed in the office of the MRD as legal point of view.

The Project Report after completion of the educational study tour is to be prepared in a book manner during the month of July or August of the every academic year in three copies. One copy should be retained at the training centre, second one is to be submitted to the Principal of the concerned Institution and third copy to the candidate after getting the signature of the Medical Record Officer and Principal of the concerned Institution or training centre.

The concerned training institutions or centre are required to provide training Institution's/Centre's bus or van on the basis of the students strength which accommodate in such vehicles with good condition to avoid inconveniences and troubles faced by the students during their journey for educational study tour's period. The expenditure incurring on the journey of study tour, that is, the Vehicle's Fuel, Driver, Cleaner, and accompanying Teacher should be borne by the students.

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## Final Year's DMRT Students Curriculum:

| Sl. No. | Subject                    | No. of Hours |                             | Total  |
|---------|----------------------------|--------------|-----------------------------|--------|
|         |                            | Theory       | Practical/<br>Demonstration |        |
| 1       | Medical Terminology        | 90 hrs       | Nil                         | 90Hrs  |
| 2       | Hospital Administration    | 60 Hrs       | Nil                         | 60 Hrs |
| 3       | Computer Science           | 10 Hrs       | 50 Hrs                      | 60 Hrs |
| 4       | Medical & Surgical Coding  | 10 Hrs       | 40 Hrs                      | 50 Hrs |
| 5       | Project Works in Med. Rds. | -            | --                          | --     |

### Examination Pattern:

Theory Max 50 marks

- |                                 |                 |
|---------------------------------|-----------------|
| 1. Short notes- answer any four | 4*5=20marks     |
| 2. Short answers                | 10*3=30 marks   |
| <b>Total</b>                    | <b>50 marks</b> |

| Paper     | SUBJECT                             | SECTION   | Question paper Code | MAX. MARKS |
|-----------|-------------------------------------|-----------|---------------------|------------|
| Paper 1   | Medical Terminology                 | Section A | <b>6141</b>         | 50         |
|           |                                     | Section B | <b>6142</b>         | 50         |
| Paper 2   | Hospital Administration             | Section A | <b>6143</b>         | 50         |
|           |                                     | Section B | <b>6144</b>         | 50         |
| Paper 3   | Computer Sciences                   | Section A | <b>6145</b>         | 50         |
|           | Computer Sciences Practical         | Section B |                     | 50         |
| Paper 4   | Medical / Surgical Coding           | Section A | <b>6146</b>         | 30         |
|           | Medical / Surgical Coding Practical | Section B |                     | 70         |
| Practical | Project Report                      |           |                     | 100        |

### REFERENCE BOOKS:

1. Medical Record Management - By EDNA HUFFMAN  
Book for Reference:  
Medical Record Organisation and Management by Dr. G.D.MOGLI  
Hand book of Medical Record Technology - By Ms. ALEY JACOB  
(Christian Medical Association of India Publications, Delhi)
2. Anatomay and Physiology - by EVELYN PEARS 16th Edition
3. Elements in Bio-statistics - by Dr. SUNDER RAO  
Hospital Administration - by Dr. FRANCIS .C.M (JayPee Publications)

**Students should know- In All 3 years \* (not included in practical examination)**

### **Basic computers and Information Science-Practical**

Practical on fundamentals of computers -

1. Demonstration of basic hard ware of the computers and laptops
2. Learning to use MS office: MS word, MS PowerPoint, MS Excel.
3. To install different software.
4. Data entry efficiency

### **DMRT- Communication and Soft Skills, Spoken English-Practical**

1. Précise writing and comprehension of simple passages from a prescribed text book. The passage should be atleast 100 words and students should answer a few questions based on it.
2. To practice all forms of communication i.e. drafting reports, agendas, notes, précise writing, circulars, presentations, telephonic communication, along with practice on writing resumes and applications for employment.

### **DMRT- Medical Terminology, Record keeping (including anatomical terms) and Orientation to Medical Laboratory Science Technology (MRT)-Practical**

1. General discussion/Sensitization on career opportunities and role of MRT in Hospital Care
2. Visit to Central Sterile Supply Department (CSSD)
3. Visit to incinerator complex
4. Visit to Immunization section

### **DMRT- Introduction to Quality and Patient safety (including Basic emergency care and life support skills) Practical**

#### **DMRT- Environmental Science-Practical**

1. Any Activity related to public awareness about the environment:
  - 1.1. Preparation of Charts/Models
  - 1.2. Visit to any effluent treatment plant
2. Effects of environmental pollution on humans through poster presentation.
3. Any activity related to biomedical waste management in a hospital or clinical laboratory

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