

BHARATHIAR UNIVERSITY; COIMBATORE 641 046
CENTRE FOR COLLABORATION OF INDUSTRIES AND INSTITUTIONS
B. Sc. PHYSICIAN'S ASSISTANCE
(For the CCII candidates admitted from the academic year 2015-16 onwards)

SCHEME OF EXAMINATIONS – CBCS PATTERN

Part	Subject	Ins. Hrs/week	Examinations				Credits
			Dur. Hrs.	CIA	Marks	Total	
FIRST SEMESTER							
I	Language -I	6	3	25	75	100	4
II	English - I	6	3	25	75	100	4
III	Core I - Introduction to Health and Healthcare	6	3	25	75	100	4
III	Core II – Applied Basic Sciences- I	5	3	25	75	100	4
III	Allied Paper I– Introduction to Secretarial & Computer Skills	5	3	25	75	100	4
IV	Environmental Science #	2	3	-	50	50	2
SECOND SEMESTER							
I	Language -II	6	3	25	75	100	4
II	English -II	6	3	25	75	100	4
III	Core III - Applied Basic Sciences- II	4	3	25	75	100	4
III	Core IV - Applied Basic Sciences- III	4	3	25	75	100	4
III	Core Practical I- Clinical Sciences – I	4	3	40	60	100	4
III	Allied Practical – Information Technology/ Communication Skills	4	3	40	60	100	4
IV	Value Education – Human Rights#	2	3	-	50	50	2

I SEMESTER
Core I -INTRODUCTION TO HEALTH AND HEALTH CARE

Unit I

What is health – What is health care – Preventive – Curative – rehabilitative – individual – society's health.

Unit II

Private health care in India – No. of doctors - Clinics – Nursing Homes – Hospitals – Laboratories – Public health care in India – Central, State. Description of facilities till Primary health centre.

Unit III

Community health care – Role of NGO's.- What is an NGO – Examples – Role played by them in India

Unit IV

Health economics –Health care facilities in management – Health research – Importance of these there in Individual context.

Unit V

Where does physician's fit in – Where does physician's assistant fit in – Modern Health care – Future of health care – States obligation in health care – Role of Health insurance – Experience in other countries

Core II - APPLIED BASIC SCIENCES - I

Unit I

Introduction to Human Body

What is health – How to achieve this – WHO definition of health - Conception of birth – Growth of foetus – Growth of a baby into an adult – Development mental, physical – ageing death - Overview of Structure and function – Basic Structure – Cell functions of a cell – Cell death – Life – Death - How all systems work together to keep a man alive- Overall view of human body's functioning. -

Unit II

Nutrition – Essential, nutrients – How we acquire them – Why deficiency

Unit III

Anatomy I

Definition and subdivisions of anatomy, anatomical position and terminology, regions and system of the body, cavities of the body and their contents.
Size and shape of cells. Parts of cells, Cell division, Tissues of the body, Characteristics and function of different types of tissues, types of glands.

Anatomy II

Skeleton – Definition axial and appendicular skeleton with names and location of bones. Joints – Definition, Types of muscles, Difference between striated and smooth muscle, Functions of the muscle, Bone and joints.

Subdivisions of nervous system, Brain – location, External features and functions of brain and spinal cord, Location features, Functions of the sense organs.

Unit IV

Physiology I

The types and structure of blood vessels. Shape, Structure of heart, blood supply to heart and functions of cardio vascular system.

The name, Location of organs of respiration and physiology of respiration.

Physiology II

Name, Parts and functions of alimentary canal and accessory organs.

Names of endocrine gland – Location and features and functions of the endocrine glands. Parts and functions of kidney, Ureter, bladder and urethra.

Unit V – Biochemistry (theoretical)

Carbohydrate absorption, Metabolism, Maintenance of blood glucose levels – Hormonal influence, diabetes mellitus protein – Digestion absorption and metabolism – Lipid digestion absorption and metabolism – Water and other nutrient metabolism.

Allied Paper I -INTRODUCTION TO SECRETARIAL AND COMPUTER SKILLS

Unit I

Need for a secretary – Functions of a secretary – Role of a secretary in the hospital setup – Bridge between physicians and patients and his/her family

Unit II

Secretarial Skills, Communication language, Typing, Recording, Acting as intermediary between Doctors

Unit III

Computerization – What is it? Advantages, Requirements, skills needed to implement and use it

Unit IV

MS Office – Word – Introduction – Handling – Excel – Power point – Slide Presentation – Preparing slides

Unit V

Helping the Doctor – Receiving patient Outpatient – Appointments – Money collection – Medical report preparation – Doctors talk slide preparation

II SEMESTER
Core III - APPLIED BASIC SCIENCES - II

Unit I – Clinical Pathology

Blood and its constituents, urine – composition, complete urine analysis – Physical, chemical – glucose, protein, reducing substances, ketone bodies, Blood pigments bile, sediments, body fluids, CSF and semen analysis. Parasitology – Classification of common human parasites.

Unit II – Biochemistry (Laboratory)

Carbohydrates, Proteins, Lipids, Electrolyte- H₂O – Arterial blood gas analysis – Buffers – Round function – Liver function – Enzymes.

Unit III – Microbiology

Introduction – Definition and importance of microbiology classification of microorganism. Brief morphological features of microbes. General properties of bacteria viruses and fungus. Chain of infection - Definition of infection, chain of infection – Sources of microbes. Routes of infection and prevention of hospital acquired infection, Immunity and its types.

Unit IV – Histopathology

Sample reception – Record Keeping – Specimen fixation and fixations – Processing of tissue – Embedding Microtomy – Routine and special stains – Frozen sections.

Unit V – Immunology

Introduction – Barriers for defense – Homeostasis – Vaso contraction – Platelets – Blood coagulation – Anticoagulants – Inflammatory response and wound healing – specific immune responses – Cellular immunity – Humoral immunity monoclonal antibodies.

Core IV - APPLIED BASIC SCIENCES - III

Unit I – Pathology

Introduction – Techniques in pathology – Micro dissection – Microscopy – Examination of fixed tissues lipid soluble dyes – The electron microscope – The virulent infuge.

Unit II – Pathology

Electrophoresis – Chromatography – Fluorescent tracing – Techniques – radioactive Isotopes – Photography – Tissue culture.

Unit III – Microbiology

Sterilization – Definition and classification physical methods of sterilization, Use of autoclave, Preparations and Sterilization of surgical packs.

Disinfection – Definition and classifications, Methods disinfection. Principles of cleaning and disinfection the rubber, goods, Glasswares, Packs, linens, Equipments.

Collection and transport of specimen, Standard precautions for precaution for prevention of blood borne infection. Collection of culture sources from theatre. Biomedical waste segregation and waste management.

Unit IV – Pharmacology

Definition – Drugs – Pharmacy – source of drugs – forms of drugs – Routes of administration – various types of drugs – Classification – advantages and disadvantages of drugs
– dose – definition – Minimum dose – Maximum Dose – Over dose – Oral Administration – Purpose of administration – Methods of administration – Calculating dosage – Domestic measurement - Metric system – Table measure – Injection – Definition – Purpose of injection – common dangers of injection – Different routes – Injection – Special points to be remembered.

Unit V – Therapeutics

Pharmacology used to treat diseases – Role in patients – Absorption – Drug interaction – Drug toxicities – Therapy of common diseases.

CORE PRACTICAL I: CLINICAL SCIENCES - I

Unit I – Examination of the patient

History taking – History of the present illness – family history – personal history – possible diagnosis

Unit II – Physical Examination – 1

General – Consciousness – Other features – Height – Weight – Body surface area – Pulse – Blood pressure – Respiration temperature

Unit III – Physical Examination – 2

Hear sounds – Murmurs – Cardiac hypertrophy – Breath sounds – Rates - Rhonehi

Unit IV – Physical Examination – 3

Septomegaly – Spleenomegaly – Tenderness – Over abdomen – Abdominal distension – Percussion – Palpation – auscultation – Gental.

Unit V – Physical Examination – 4

Nervous systems – Consciousness level – Pupils – Neck rigidity – Movements of limbs – Muscle power.

**ALLIED PRACTICAL: INFORMATION TECHNOLOGY /
COMMUNICATION SKILLS**

Unit I

Patient Registration - Appointment - Hospital Reception - Reason for registering patient – Ideal method of patient identification

Unit II

Communicating to treating physician - Different methods of giving appointments – function and problems of hospital reception – Importance of organization medical report – Use of MRD.

Unit III

Communication to relatives - Need for public education - Various methods of public education – Disadvantage of inadequate wrong education – Referring doctor – Role of referring doctor in patient treatment continuation - Rights of the referring doctor – Oral and letter communication to referring doctor.

Unit IV

Communicating to Public - Information be given to relatives about disease and future course including cost – Which relatives to communicate with

Unit V

Communication to referring doctor - Importance of organization information – Needed by the physician from his assistant – Verbal written and system based information transfer to the physician.