MAHATMA GANDHI UNIVERSITY
of
MEDICAL SCIENCES & TECHNOLOGY
JAIPUR

Syllabus

B. Sc. Physician Assistance Technology

(Three Years Program)

Edition 2020-21

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. MEDICAL TECHNOLOGY COURSES

(3 Years Degree Course)

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.

OBJECTIVES:
At the end of the goal, the learner should be able to:
(1) Perform medical and surgical procedural and technical skills essential to Physician Assistant practice
(2) Perform appropriate history and physical examinations.
(3) Develop and Implement patient management plans
(4) Understand the role of preventive medicine in healthcare including screening recommendations
(5) Counsel and educate patients and their families while demonstrating compassion and respectful behaviors
(6) Candidate admitted to this course will work during his / her training in hospitals, in outpatient, inpatient and hospital's all other departments. He / She has to attend theory classes as specified.

ELIGIBILITY FOR ADMISSION:

- For admission a candidate should have passed the 10+2 (Senior Secondary) Examination or its equivalent Examination Science stream i.e. Physics, Chemistry and Biology Subjects with 50% marks in the aggregate from any recognized Board.
- Candidate should have completed the minimum age of 17 years as on 31st December of the year of admission to BSc. Medical Technology Course.

SELECTION OF CANDIDATES:
Selection for B.Sc. Medical Technology Courses shall be done by an Admission Board strictly on merit judged on the basis of University Entrance Examination conducted in the month of July / August every year.

COMMENCEMENT OF THE COURSE
The Course shall commence from the 1st 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 75% 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. Physician Assistance Technology Courses in Mahatma Gandhi Medical College & Hospital shall be required to get himself/herself

enrolled with the Mahatma Gandhi University of Medical Sciences & Technology after paying the prescribed eligibility/enrolment 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 enrolment/eligibility along with the original documents with the prescribed fees (upto November 30 of the year of admission without late fees and upto 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 70.
   (b) Internal assessment shall be of 30 marks for Each Theory paper.
   (c) The number of question papers shall be in accordance with the different subjects/areas covered during each of the B.Sc. three years course. The number of question papers shall vary from course to course as per the subjects covered in different disciplines of the B.Sc. Physician Assistance Technology Courses 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. Radio Imaging Technology (RIT)	400	200	4 question papers for each year	4 Internal Paper Setters	3 Internals + 1 External paper setter
2	B.Sc. Medical Laboratory Technology (MLT)	300	150	3 question papers for each year	3 Internal Paper Setters	2 Internals + 1External paper setter
3	B.Sc. Clinical Dietetics (CD)	300	150			
4	B.Sc. Physician Assistance Technology (PAT)	200	100	2 question papers for each year	2 Internal Paper Setters	1 Internal + 1External paper setter
5	B.Sc. Operation Theater Technology (OTT)	200	100			
6	B.Sc. Ophthalmic Techniques and Optometry (OTO)	200	100			
7	B.Sc. Surgical Assistance (SA)	200	100			

   (d) For the First and Second year examinations – these respective above question papers (four, three or two as the case may be) 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 70 marks and internal assessment for that paper of 30 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 course being not uniform shall vary in B.Sc. Physician Assistance Technology degree course of different disciplines.

(c) The pattern shall be as follows –

<table>
<tr><th rowspan="2">S. No.</th><th rowspan="2">Name of Course</th><th colspan="2">Practical</th><th colspan="3">Practical Examiners</th></tr>
<tr><th>Total Marks</th><th>Pass Marks</th><th>First year</th><th>Second year</th><th>Third year</th></tr>
<tr><td>1</td><td>B.Sc. R.I.T.</td><td>400</td><td>200</td><td rowspan="3">3 Internal Examiners (+Expert(s) if needed)</td><td rowspan="3">4 Examiners (3 Internal+ 1 External)</td><td rowspan="3">4 Examiners (3 Internal+ 1 External)</td></tr>
<tr><td>2</td><td>B.Sc. M.L.T.</td><td>300</td><td>150</td></tr>
<tr><td>3</td><td>B.Sc. C.D.</td><td>300</td><td>150</td></tr>
<tr><td>4</td><td>B.Sc. P.A.T.</td><td>200</td><td>100</td><td rowspan="4">2 Internal Examiners (+Expert(s) if needed)</td><td rowspan="4">3 Examiners (2 Internal+ 1 External)</td><td rowspan="4">3 Examiners (2 Internal+ 1 External)</td></tr>
<tr><td>5</td><td>B.Sc. O.T.T.</td><td>200</td><td>100</td></tr>
<tr><td>6</td><td>B.Sc. O.T.O.</td><td>200</td><td>100</td></tr>
<tr><td>7</td><td>B.Sc. S.A.</td><td>200</td><td>100</td></tr>
</table>

(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. Physician Assistance Technology 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 in case of Radio Imaging Technology having 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 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 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^{rd}) year examination only when the backlog of all papers (theory and practical) of 1^{st} and 2^{nd} 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: Senior Demonstrator and above.
3. Paper setter can be an examiner

REVALUATION / SCRUTINY

Re-evaluation of answer book(s) of the B.Sc. Physician Assistance Technology courses 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. Physician Assistance Technology courses 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:

Marks obtained by the candidate above the required minimum aggregate pass marks		**Grace marks can be given up to**
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.

Selection of Generic Elective and skills Enhancement Courses

Every student has to select any one elective subject out of seven elective subjects mentioned below at the beginning of the academic year during his/her course duration. The Examination of these subjects shall be conducted at the college level.

Sr. No.	Subject	Teaching hours		
		Theory	Practical	Total
1	Disaster Management	45	15	60
2	Information and Communication Technology in Health Education	45	15	60
3	Clinical Nutrition	45	30	60
4	Yoga	45	30	60
5	Effective English	45	50	50
6	Health Care	50	-	50
7	Constitution of India	50	-	50

Distribution of marks

S. No.	Subject	Theory	Internal Assessment	Total
1	Disaster Management	70	30	100
2	Information and Communication Technology in Health Education	70	30	100
3	Clinical Nutrition	70	30	100
4	Yoga	70	30	100
5	Effective English	70	30	100
6	Health Care	70	30	100
7	Constitution of India	70	30	100

A candidate can appear in the elective subject examinations to be conducted at the college level before the University examinations at the end of I year or II year or III year. Only such candidates shall be eligible to fill University examination form of III year (final year) who have passed their elective subject. It shall be mandatory to obtain 50% marks in the aggregate of prescribed total marks (i.e. 50 out of 100) to pass the elective subjects. Marks of all such candidates who have passed their elective subject shall be sent in the following format by the Principal of the college to the University while sending their examination forms of III year (final year) :

S. No.	University Roll No.	Name of the student	Father's Name	Name of elective subject	Marks obtained	Result

Those candidates who do not pass their elective subjects shall not be eligible to submit their III year (final year) University examination form and accordingly they will not be permitted to appear in the University examination of III year (final year) of the course.

Marks obtained by the candidates in their elective subject shall be mentioned separately in the marks sheets of the University examinations. These marks shall not be counted for preparing the merit list.

B.Sc. Physician Assistance Technology

Recommended Teaching Hours of Instruction for each subject

First Year B.Sc. Physician Assistance Technology Course

S. No.	Course Title	Hours
1.	English Language, Introduction to Health and Healthcare, Introduction to Secretarial and Computer skills	100
2.	Applied Basic Sciences - I (Anatomy/Physiology/Biochemistry).	100
3.	Practical	200
	Total hours :	**400**

Second Year B.Sc. Physician Assistance Technology Course

S. No.	Course Title	Hours
1.	Advanced Secretarial Skills Hospital Management	100
2.	Applied Basic Sciences – II (Pathology/ Histology/Pharmacology/Microbiology)	100
3.	Practical	200
	Total hours :	**400**

Third Year B.Sc. Physician Assistance Technology Course

S. No.	Course Title	Hours
1.	Clinical Sciences - Common Diseases of Human Body, Emergency Medicine and Treatment of Common Illnesses	100
2.	Law Insurance in Healthcare, Medical Instrumentation	10
3.	Practical	200
	Total hours :	**400**

Total Hours- 400+400+400= 1200

Marks Distribution

First Year B.Sc. Physician Assistance Technology

Code No	Subject	Written			Practical		
		Theory	I.A. Theory	Total Theory	Practical + Oral	I.A. Practical	Total Practical
7251	English Language, Introduction to Health and Healthcare, Introduction to Secretarial and Computer skills	70	30	100			
7252	Applied Basic Sciences - I (Anatomy/Physiology/Biochemistry)	70	30	100			
7253	Practical	-	-	-	140	60	200
Total		**140**	**60**	**200**	**140**	**60**	**200**

Second Year B.Sc. Physician Assistance Technology

Code No	Subject	Written			Practical		
		Theory	I.A. Theory	Total Theory	Practical + Oral	I.A. Practical	Total Practical
7254	Advanced Secretarial Skills Hospital Management	70	30	100			
7255	Applied Basic Sciences – II (Pathology/ Histology/Pharmacology/Microbiology)	70	30	100			
7256	Practical	-	-	-	140	60	200
Total		**140**	**60**	**200**	**140**	**60**	**200**

Third Year B.Sc. Physician Assistance Technology

Code No	Subject	Written			Practical		
		Theory	I.A. Theory	Total Theory	Practical + Oral	I.A. Practical	Total Practical
7257	Clinical Sciences - Common Diseases of Human Body, Emergency Medicine and Treatment of Common Illnesses	70	30	100			
7258	Law Insurance in Healthcare, Medical Instrumentation	70	30	100			
7259	Practical	-	-	-	140	60	200
Total		**140**	**60**	**200**	**140**	**60**	**200**

Total Marks- 400+400+400=1200

First Year B.Sc. Physician Assistance Technology
(1 Year Duration)

Paper-I

English Language, Introduction to Health and Healthcare, Introduction to Secretarial and Computer skills

Theory Hours: 100
Total: 100

English Language

(1) Definition, basic principle, properties and role of technical writing
(2) Information structure and techniques, distinction between technical and literary writing
(3) Styles in technical writing,
(4) Types of technical report: report layout, formal report format, memorandum report, letter report.
(5) Bulletins, abstract, proposal, research report, feasibility study,
(6) Business letter: definition, purpose, elements, characteristics, format, styles & types,
(7) Resume and cover letters
(8) Guidelines in technical writing, writing process from audience to rough draft, audience analysis, task analysis, power – revision techniques, libraries.
(9) Documentation, cross-referencing, basic patterns and elements of the sentence, common grammar, usage, punctuation problems, common spelling problems
(10) Graphic aids:- Bar chart, line chart, table, circle or Pie chart, surface or strata chart, map charts, flowcharts, flow sheets, diagrams , figures, photographs , drawings, important points in handling graphics

Introduction to Health and Health Care

(1) What is health
(2) What is health care
(3) Preventive – Curative – rehabilitative – individual –society's health.
(4) Private health care in India – No. of doctors - Clinics – Nursing Homes – Hospitals – Laboratories – Public health care in India – Central, State.
(5) Description of facilities till Primary health centre.
(6) Community health care – Role of NGO's.- What is an NGO – Examples – Role played by them in India
(7) Health economics –Health care facilities in management – Health research – Importance of these in Individual context.
(8) Where does a physician 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

Introduction to Secretarial and Computer Skills

(1) 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.
(2) Secretarial skills, Communication language, Typing, Recording, Acting as intermediary between Doctors.
(3) Computerization – What is it? Advantages, Requirements, skills needed to implement and use it.

(4) MS Office - Word –Introduction – Handling - Excel – Power point – Slide Presentation – Preparing slides.
(5) Helping the doctor – Receiving patient - Outpatient Appointments – Money collection – Medical report preparation – Doctors talk slide preparation.

Paper – II

Applied Basic Sciences - I

Anatomy /Physiology/ Biochemistry

Theory Hours: 100
Total: 100

(1) Introduction to Human Body
(2) 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 of a cell – Cell death, - How all systems work together to keep a man alive- Overall view of human body's functioning. -
(3) Nutrition – Essential, nutrients – How we acquire them – Why deficiency
(4) Anatomy I
    (a) 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.
(5) Anatomy II
    (a) 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.
(6) Physiology I
    (a) 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.
(7) Physiology II
    (a) Name, Parts and functions of alimentary canal and accessory organs.
    (b) Names of endocrine gland – Location and features and functions of the endocrine glands. Parts and functions of kidney, Ureter, bladder and urethra.
(8) Biochemistry (Theoretical)
    (a) 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.
(9) Biochemistry (Laboratory)
    (a) Carbohydrates, Proteins, Lipids, Electrolyte – Arterial blood gas analysis – Buffers – Renal function – Liver function – Enzymes

Practical

Practical Hours: 200
Total: 200

Paper – I

Information Technology / Communication Skills/English

(1) Patient Registration - Appointment - Hospital Reception - Reason for registering patient – Ideal method of patient identification
(2) Communicating to treating physician - Different methods of giving appointments – function and problems of hospital reception – Importance of organization medical report – Use of MRD.
(3) 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 referring doctor – Oral and letter communication to referring doctor.
(4) Communicating to Public - Information given to relatives about disease and future course including cost – Which relatives to communicate with
(5) 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
(6) Spoken English / comprehension and patient oriented communication skills

Paper II
Anatomy/Physiology/Biochemistry

(1) Phlebotomy, collection of blood sample and storage
(2) Urine collection / analysis / normal and abnormal values significance
(3) Biochemical parameters and their normal and abnormal values / significance
(4) Cardiac enzymes – significance
(5) Instruments and their importance
(6) Entering the data into the computer system
(7) Giving a scenario – ask to interpret to the doctor and to the patient
(8) Bones and their identification
(9) Picture identification
(10) CSF / Pleural fluid /Asciticfluid analysis and their significance

Second Year B.Sc. Physician Assistance Technology
(1 Year Duration)

Paper-I

Advanced Secretarial Skills, Hospital Management

Theory Hours: 100
Total: 100

Advanced Secretarial Skills

(1) Data Processing – Technical Report Writing – Technical communication – Discharge summary
(2) Preparing presentations – Letters to Government, Voluntary Agencies – Permissions from various agencies
(3) Financial options for hospitals – Communications with banks – Project Reports – Referring a patient – Appointments – All forms of communication.
(4) Maintaining patient records – Reports – Knowledge about the patient.
(5) Health Insurance.

Hospital Management

(1) General organization - Hospital function – How it is organization – Organization of a clinic – Nursing home - Specialty hospital – Multispeciality hospital.
(2) Financial structuring – Investment – Various expenditures – Land – Building – Equipment – Others – Recurring expenditure.
(3) Day to day Management – Problem solving – Their solutions.
(4) Medical Manpower – Consultants – Full time – Part time appointments.
(5) Outsourcing – Managing Outsourcing

Paper II
Applied Basic Sciences–II (Pathology/Histology/Pharmacology/ Microbiology)

Theory Hours: 100
Total: 100

Clinical Pathology

(1) Introduction – Techniques in pathology – Micro dissection – Microscopy – Examination of fixed tissues lipid soluble dyes – The electron microscope – The virulent infuse.
(2) Electrophoresis – Chromatography – Fluorescent tracing – Techniques – radioactive
(3) Isotopes – Photography – Tissue culture.
(4) 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.

Histopathology

(1) Sample reception – Record Keeping – Specimen fixation and fixations – Processing of tissue – Embedding Microtomy – Routine and special strains – Frozen sections.

Immunology

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

Pharmacology and Therapeutics

(1) Definition – Drugs – Pharmacy – source of drugs – forms of drugs
(2) Routes of administration – various types of drugs – Classification – indication and adverseeffects of drugs
(3) Dose – definition – Minimum dose – Maximum Dose – Over dose
(4) Oral Administration – Purpose of administration – Methods of administration
(5) Calculating dosage – Domestic measurement - Metric system – Table measure
(6) Injection – Definition – Purpose of injection – common dangers of injection – Different routes – Injection – Special points to be remembered.
(7) Pharmacology used to treat diseases – Role in patients – Absorption – Drug interaction – Drug toxicities – Therapy of common diseases.

Microbiology

(1) Introduction – Definition and importance of microbiology classification of microorganism. Brief morphological features of microbes. General properties of bacteria viruses and Fungus.
(2) Chain of infection - Definition of infection – Sources of microbes. Routes of infection and prevention of hospital acquired infection, Immunity and its types.
(3) Sterilization – Definition and classification physical methods of sterilization, Use of autoclave, Preparations and Sterilization of surgical packs.
(4) Disinfection – Definition and classifications, Methods of disinfection. Principles of cleaning and disinfection of the rubber-goods, Glasswares, Packs, linens, Equipments.
(5) Collection and transport of specimen, Standard precautions for prevention of blood borne infection. Collection of culture sources from theatre. Biomedical waste segregation and waste management.

Practical

Practical Hours: 200
Total: 200

Paper – I

Advanced Secretarial Skills, Hospital Management

MRD

(1) What is MRD – Its Organization – Basic requirements functions – How to run it efficiently – Problems – How to solve them - Equipment in MRD

Outpatient Office

(1) Functions of Outpatient office – Equipments ad facilities in MRD – How to use them effectively – Computerization

Billing Department

(1) Responsibilities of Billing department – Inputs Needed – Activity – How to record this – Problems – Practical solutions.

Ward Secretary

(1) Responsibilities of ward secretary – Actual problems faced by ward secretary – How to solve them.

Common problems faced by patients (Both Inpatient & outpatient) during treatment

(1) Interaction with patients and problem solving.

Paper – II

Pathology/Histology/Pharmacology/ Microbiology

(1) Viral markers and their significance
(2) Culture methods / techniques / swab etc.
(3) Stool analysis
(4) Mantoux test and its significance
(5) Viral markers /HIV testing – interpretation
(6) Pregnancy test
(7) Sterile techniques / sterilization of lab
(8) Microscope
(9) Blood counts and ESR
(10) Slide preparation/ staining
(11) Malarial parasite identification and its test
(12) Disposing lab waste materials
(13) Entering the data into the computer system
(14) Giving a scenario – ask to interpret to the doctor and to the patient
(15) Slides – Columnar, ciliated columnar , squamous , cuboidal epithelia
(16) Pictures identification

Third Year B.Sc. Physician Assistance Technology
(1 Year Duration)

Paper-I

Clinical Sciences - Common Diseases of Human Body, Emergency Medicine and Treatment of Common Illnesses

Theory Hours: 100
Total: 100

Clinical Sciences:

Common Diseases of Human Body

(1) Diseases
   (a) What is infection? – How infection affects human body – Infecting agents classification.
(2) Infectious disease
   (a) Common Bacterial – Viral – Protozoal infections – Their diagnosis and treatment.
(3) Diseases of heart and lungs
   (a) Rheumatic heart disease – Valvular heart disease – – Lung infection – Pneumonia – Tuberculosis.
(4) Disease of Gastrointestinal system
   (a) Oesophagus – Stomach – Intestinal diseases – Peptic ulcer – Carcinoma – Gastrointestinal diseases-diarrhoeas – Amoebic infection – Jaundice – Liver disease– Liver cirrhosis.
(5) Disease of thyroid
   (a) Hypothyroidism – Hyperthyroidism – Diabetes Mellitus –Pheochromocytoma.

Emergency Medicine

(1) What is emergency in medical care – Why is it emergency – How life can be lost in a few minutes in some situations – How this can be saved examples – Golden Hour
(2) Road Traffic Accidents - How accidents happen – What causes injury – Types of injury – Effects of injury on life – what is done immediately – What are the treatments done – Result
(3) In hospital emergencies - How an emergency develops in a hospital – Common emergencies – How to manage.
(4) Emergencies out of hospital - Common emergencies in a public places – Houses – Offices – Theatre – Sport fields – How to manage.
(5) Basic steps to be taken in emergency – CPR - What is CPR – Usefulness – Steps – How to learn.
(6) Basic understanding of ECG

Treatment of Common Illness

(1) Malaria – Typhoid – Viral fever – Malnutrition – Anemia
(2) HIV – HCV – HbsAg
(3) Tuberculosis
(4) Cirrhosis – Jaundice
(5) Geriatric care
(6) Pediatric care

Paper – II

Law Insurance in Healthcare, Medical Instrumentation

Theory Hours: 100
Total: 100

Law Insurance in Healthcare

(1) Psychology in relation to patients – Doctors and hospital staffs – patient's relatives – How to handle these people in time of stress
(2) What is medical ethics – what is unethical in medicine – How to prevent unethical practices
(3) Role of law in medicine – Consumer protection to medical practitioners.
(4) Health insurance – Role play by health insurance all over the world – Present state of health insurance in India – Problems & possible solutions.
(5) Interacting with Health insurance providers – Data to be ready -records to be maintained - solution for problems in individual patients and health insurance.

Medical Instrumentation

(1) X- ray machine – IITV (Image intensifying television) - Fluoroscopy - Ultrasound sonogram – Glucometer - Sphygmomanometer
(2) ECG machine –MRI Scan – CT scan – Digital X – ray (Computerized Radiography)
(3) ICU care machine maintenance – Artificial breathing machines – Oxygen cylinders – Pulse oximeter - Cardiac Monitors – Defibrillators.
(4) Arterial Blood Gas analyzer – Dialysis machine – Peritoneal Dialysis – Haemodialysis Machine - Endoscopy machine.
(5) How to handle all these machines – Problem Solving

Practical

Practical Hours: 200
Total: 200

Paper – I
Clinical Science

Clinical Science

(1) Examination of the patient
(2) History taking – History of the present illness – family history – personal history – possible diagnosis
(3) Physical Examination – 1
(4) General – Consciousness – Other features – Height – Weight – Body surface area – Pulse – Blood pressure – Respiration – temperature
(5) Physical Examination – 2
(6) Heart sounds – Murmurs – Cardiac hypertrophy – Breath sounds – Rales - Rhonchi
(7) Physical Examination – 3
(8) Splenomegaly – Hepatomegaly – Tenderness Over abdomen – Abdominal distension – Percussion – Palpation – auscultation – Genital examination.
(9) Physical Examination – 4
(10) Nervous system – Consciousness level – Pupils – Neck rigidity – Movement of limbs – Muscle power.
(11) Ordering relevant tests in patients.

Procedures

(1) Stepwise knowledge about performing ICU Procedures & preparing the Patients
   (a) Oxygen therapy – Ryles tube feeding – Taking ECG - Arterial Blood gas analyzer – IV Infusion - CVP monitoring - Catherization – ICD – Pleural effusion drainage - Abdominal Tapping – Pericardial effusion – Biopsy – Preoperative care - ECG monitoring – Intubations – Ventilator – Defibrillation – Emergency Medicine
(2) Operation Theatre procedures I
   (a) Catherization - Stenting – CVP monitoring - D & C – What is Herniorraphy – Orchidectomy - Orchipexy- Laparotomy – Circumcision – Haemorridectomy - AVF surgery – catheterization – Nephrectomy – Cystoscopy – Stent removal – Internal Urethrotomy – Vesicolithotripsy – Trans urethral resection of prostate – - Ureteroscopy stone removal– Utetericreanastomosis - Appendix – Extra corporeal shock wave – Intubation – Meatoplasty – Pyeloplasty – Cystectomy – Hysterectomy – Cholecystectomy – Renal Transplant surgery ?

(3) Other outpatient Procedures
   (a) Dressing changing – Suture removal – Bladder catheterization – Catheter removal.

Outpatient Handling

(1) Outpatient training
   (a) New patients – What does a new patient expect – His problems – How to receive him – How to help him – What information's are to be given to him – Time spend with new patient.
(2) Review patients
   (a) Time spend with review patient – Explaining procedures – Places to him – How to present
   (b) Review patient to doctor – How to send him back without delaying.

(3) Day care patients
   (a) What is day care? – What are departments having day care patients — How to organize and look after day care patients – Problem solving in day care.
(4) Obstetrics&Gynaecology patients
   (a) What is special? – How to handle these patients – Diseases common – How to help them?
(5) Pediatric Patients
   (a) What is special in children? – How to get history and how to get clinical examination done for them? – How to keep them engaged.
(6) How to handle a doctors appointments – Computerized – Non Computerized – Keeping up appointment time in seeing patients – Delays – Identifying new patients.

Paper – II

Medical Instrumentation

Medical Instrumentation

(1) Biomedical Signals and instrumentation Sensors:
   (a) Measuring several signals from the human body – temperature - electrical and pressure. Understand noise from the environment - instruments and other physiologic systems - creating artefacts in instrumentation - theory of several sensors operation - sensors in laboratory sessions.
(2) Instrumentation Application:
   (a) Review the cardiac - respiratory - neural physiological systems - designs of several instruments used to acquire signals from living systems – ECG - blood pressure monitors - spirometers - EEG - MRI - ultrasound. Integrate information - biomedical signals - sensors and instrumentation design to create a design of your own.
(3) Work in Multi-disciplinary Teams:
   (a) Written and oral communication skills necessary to present information learned from laboratory sessions. Learn how to work in a group to attain a common goal.
(4) Computers in Medical Instrumentation

B.Sc. PAT-I **ELIHHISCS. - I**
7251

B.Sc Physician Assistance Technology
Part-I (Main) Examination Month Year

Paper I

English Language, Introduction to Health and Healthcare, Introduction to Secretarial and Computer skills

Time: Three Hours
Maximum Marks: 70

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.

Q.1 What is Bar chart? How it helps in medical practice. 20

OR

Write definition, basic principle, properties and role of technical writing.

Q.2 What is the importance of computer in medicine 20

OR

Write an essay on primary health care in India.

Q.3 Short Notes (Attempt any five) 40

(a) NGO
(b) CHC
(c) DOTS centre
(d) ICTC
(e) Different superspecialities in medicine and their role.
(f) Record keeping
(g) Medical Report Preparation

B.Sc. PAT-I **ABS APB I.-II**
7252

B.Sc Physician Assistance Technology
Part-I (Main) Examination Month Year

Paper II
Applied Basic Sciences I
(Anatomy, Physiology, Biochemistry)

Time: Three Hours
Maximum Marks: 70

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.

Q.1 Classify the joints and give a detailed account of shoulder joint 15

OR

Answer the following about the heart
(a) Location
(b) dimensions
(c) surfaces
(d) apex
(e) right ventricle
(f) blood supply

Q.2 Write names of various endocrine glands – Describe location, and functions of the Thyroid gland. 15

OR

Define erythropoiesis. List the different stages of erythropoiesis and explain briefly about factors regulating it.

Q.3 Short Notes (Attempt any five) 40
(a) Enumerate the cranial nerves
(b) Functions of Liver.
(c) Scurvy
(d) Brachial plexus
(e) What are the phases of menstrual cycle
(f) Write about protein energy malnutrition
(g) What are the hormones from adrenal medulla

B.Sc Physician Assistance Technology
Part-II (Main) Examination Month Year

Paper I
Advanced Secretarial Skills
Hospital Management

Time: Three Hours
Maximum Marks: 70

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.

Q.1 Write a letter to the government to start a DOTS centre at your hospital. 15

OR

Write a referral letter to Cardiologist while you are sending a patient of Acute Myocardial Infarction from OPD clinic.

Q.2 Describe procedure to outsource a laboratory. 15

OR

Describe the Financial structuring of a nursing home

Q.3 Short Notes (Attempt any five) 40

(a) Contents of discharge summary.
(b) What is an Appointment?
(c) Hospital waste management.
(d) Recurring expenditure of a private OPD clinic.
(e) Use of mobile phones in medical practice.
(f) Common ailments usually not covered in health insurance.
(g) Use of Power point presentations.

B.Sc. PAT-II **ABS PHPM –II. - II**
7255

B.Sc Physician Assistance Technology
Part-II (Main) Examination Month Year

Paper II
Applied Basic Sciences-II
Pathology, Histology, Pharmacology, Microbiology

Time: Three Hours
Maximum Marks: 70

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.

Q.1 Elaborate on antibiotics. 15

OR

Write down the sterilization and disinfection methods in detail.

Q.2 Describe in detail about Blood and its Constituents. 15

OR

Describe in details about Cellular immunity and Humoral immunity

Q.3 Short Notes (Attempt any five) 40

(a) Oral hypoglycemic drugs
(b) Tissue Culture
(c) Standard precautions for prevention of Blood Borne infections
(d) Common dangers of infections
(e) Virus
(f) Bacteria
(g) Pharmacokinetics

B.Sc. PAT-III **CSCDHBEMTCI. - I**
7257

B.Sc Physician Assistance Technology
Part-III (Main) Examination Month Year

Paper I

Clinical Sciences-Common Diseases of Human Body, Emergency medicine and Treatment of Common Illnesses

Time: Three Hours
Maximum Marks: 70

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.

Q.1 What are the common emergencies in a public places. What is CPR? Describe the steps to perform CPR 15

OR

Write Clinical features, Diagnosis and management of Tuberculosis

Q.2 Write the clinical features, diagnosis and management of Acute Myocardial infarction. 15

OR

Describe the etiology, clinical features, diagnosis and management of Malaria

Q.3 Short Notes (Attempt any five) 40

(a) Enteric fever
(b) Management of anemia
(c) Anaphylactic shock
(d) Syncope
(e) Biopsy
(f) ABG
(g) ECG

B.Sc Physician Assistance Technology
Part-III (Main) Examination Month Year

Paper II
Law Insurance in Health care
Medical Instrumentation

Time: Three Hours
Maximum Marks: 70

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.

Q.1 What is unethical in medicine – How to prevent unethical practices? 15

OR

What is Health Insurance? Describe the Present state of health insurance in India– Problems & possible solutions.

Q.2 What is the role of law in medicine? Consumer protection to medical practitioners. 15

OR

What is a cardiac monitor? How it can help in emergencies?

Q.3 Short Notes (Attempt any five) 40

(a) Upper GI endoscopy
(b) EEG
(c) Ultrasound
(d) Spirometry
(e) Medical records
(f) ICD
(g) Lumbar puncture

Elective Paper- Non – University Examination
DISASTER MANAGEMENT

Theory Hours: 45
Practical Hours: 15
Total Hours: 60

Introduction to Disasters

a. Concepts, and definitions (Disaster, Hazard, Vulnerability, Resilience, Risks)
b. Disasters
c. Classification Causes, Impacts (including social, economic, political, environmental, health, psychosocial, etc.)
d. Differential impacts- in terms of caste, class, gender, age, location, disability Global trends in disasters. urban disasters, pandemics, complex emergencies, Climate Change

Approaches to Disaster Risk reduction

a. Disaster cycle - its analysis, Phases, Culture of safety, prevention, mitigation and preparedness community based DRR, Structural- non structural ensures, roles and responsibilities of- community, Panchayati Raj Institutions/Urban Local Bodies (PRIs/ULBs), states, Centre, and other stake- holders.

Inter-relationship between Disasters and Development

a. Factors affecting Vulnerabilities, differential impacts, impact of Development projects such as dams, embankments, changes in Land-use etc. Climate Change Adaptation. Relevance of indigenous knowledge, appropriate technology and local resources

Disaster Risk Management in India

a. Hazard and Vulnerability profile of India Components of Disaster Relief: Water, Food, Sanitation, Shelter, Health, Waste Management institutional
Arrangements (Mitigation, Response and Preparedness, DM Act and Policy, Other related policies, plans, programmes and legislation).

Project Work: (Field Work, Case Studies)

a. The project /fieldwork is meant for students to understand vulnerabilities and to work on reducing disaster risks and to build a culture of safety. Projects must be conceived creatively based on the geographic location and hazard profile of the region where the college is located

Suggested Reading list:

- Alexander David, Introduction in 'Confronting Catastrophe', Oxford University Press, 2000
- Andharia J. Vulnerability in Disaster Discourse, JTCDM, Tata Institute of Social Sciences Working Paper no. 8, 2008
- Blaikie, P, Cannon T, Davis I, Wisner B 1997. At Risk Natural Hazards, Peoples' Vulnerability and Disasters, Routledge.
- Coppola P Damon, 2007. Introduction to International Disaster Management,
- Cuny, F. 1983. Development and Disasters, Oxford University Press.

INFORMATION AND COMMUNICATION TECHNOLOGY IN HEALTH EDUCATION

Theory Hours: 45
Practical Hours: 15
Total Hours: 60

Learning objectives
Upon successful completion of this subject, students should

1. To obtain the basic knowledge on computer, devices used in computers.
2. To know the uses of computers like MS office, Power point Presentations, Excel documents.
3. To know about uses of internet, its advantages in regular updating the knowledge in Occupational therapy profession.

SYLLABUS

Introduction

1. Introduction to computers-History of Computer, Generation of Computer, Classification of Computers, Input Devices, Output Devices, Central Processing Unit, Components of CPU, Memory Unit, Peripheral Devices
2. Introduction to M.S. Windows
3. Internet and its applications
4. MGUMST web forum & portal
5. Google Applications
6. Introduction to M.S. Office - Word, Power Point, Excel,
7. Publisher

The Digital Age
Computer and communications, the five operations of a computer-and communication system- input, processing, output, storage and communications as well as the corresponding categories of hardware, five major categories of computers, development I communication Technology.

Applications Software

Applications and systems software, ethics of copying software, four types of applications software, entertainment education and reference, productivity and business and specialized, key functions of word processors, spreadsheets, database managers, graphics programs and suites, group-ware, and internet web browsers.

Storage Devices
Units of storage capacity, primary and secondary storage, data compression, data storage on diskette, hard disks, optical disks, and magnetic tape and describe the purposes of storage media.

Communications
Usage of communications technology, telephone-related services, online information services, the internet

Multimedia

What is multimedia – Multimedia PC– Multimedia Hardware - Central processor – color display, Multimedia accessories – CD ROM – Digital Audio – Audio speakers – Digital video– MIDI – deodisc Read/write storage device- Multimedia software

Radio propagation:

Use of computers in physical therapy – Application Packages used in statistical analysis.

Recommended books

1. Free T. Hotstetter, ―Multimedia Literacy‖ M<egraw Hill,
2. Simon J. Gibbs, Dinoysios C. Tsichritziz, ―Multimedia programming‖, Addison Wesley
3. John F.Koefgel Buford, ―Multimedia Systems‖, Addison Wesley
4. John Vince, ―Virtual Reality Systems‖ Addison Wesley.
5. AndressF.Molisch, ―Wideband Wireless digital communication‖ Pear Education Asia

CLINICAL NUTRITION

Theory Hours: 45
Practical Hours: 15
Total Hours: 60

COURSE OBJECTIVE:

The objective of this course is that after 30 hours of L, D, P the student shall be able to understand the basic knowledge about Diet, balanced diet, metabolism, malnutrition, under nutrition, over nutrition, deficiency disease.

COURSE OUTCOME:

1. Become familiar about the nutritive values of food.
2. Explain about the food sources from which we obtain vitamins.
3. Become familiar with various compositions of food.
4. Well versed with digestion at each stages of digestive system.
5. Become familiar with different cooking methodologies.
6. Know and explain about food preparations by food manufacturer.
7. Explain thoroughly about the advantages and disadvantages of various convenience foods.

UNIT ISOURCES OF FOOD

1. Nutritive value of foods,
2. Food Sources from which key vitamins are derived

UNIT II DIGESTIVE SYSTEM

1. Digestion and absorption –Digestion at each stage of the digestive system
2. Dietary guidelines- Factors affecting food requirements. Planning and serving of family meals. Meals for all ages and occupations.

UNIT III COMPOSITION OF FOOD

Composition and value of the main foods in the diet - Milk, meat, fish, cheese, eggs, margarine and butter cereals (wheat, rice, maize, millets, oats) fruits and vegetables

UNIT IV PROCESSING OF FOOD

1. Cooking of food -Transfer of heat by conduction, convection and radiation.
2. Principles involved in the different methods of cooking – boiling, stewing, grilling, baking, roasting, frying, steaming, pressure cooking, cooking in a microwave oven.

FOOD PREPARATION

1. Convenience foods- Foods partly or totally prepared by a food manufacturer – dehydrated, tinned, frozen, ready to eat. Intelligent use of these foods.

2. Advantages and disadvantages

Text Book:

1. Agarwal, Textbook of human nutrition, JP, 1 Ed, 2014

Reference:

1. Kenneth F. Kiple, KriemhildConeè Ornelas, The Cambridge world history of food, Cambridge University Press,Ist ed,2000

YOGA

Theory Hours: 45
Practical Hours: 15
Total Hours: 60

COURSE OBJECTIVE:

The objective of this course is that after 30 hours of lectures & demonstrations, the student will be able to understand the basic concepts about Asanas and its effects, therapeutics effects of Yoga

COURSE OUTCOME:

1. Demonstrate the introduction and principles of yoga.
2. Knowledge of history of yoga and yoga in modern India.
3. Outline of yoga background and importance of yoga in modern world.
4. Learning the types and forms of Asanas and description of physiological effect of yoga.
5. Understanding the role of yoga in Occupational Therapy

UNIT-I Introduction to Yoga

1. Introduction to Yoga
2. Principles of Yoga

UNIT- II Patanjali

1. History of Yoga
2. Yoga in Ancient and Modern India

UNIT- III Folds of Yoga

1. Types & Forms of Yoga
2. Asanas & its physiological effects

UNIT- IV Yogic Science

1. Scientific background of Yoga
2. Yoga in modern world

UNIT -V Advantages of Yoga

1. Physiological Effects of Yoga
2. Therapeutic Uses of Yoga

Textbook:

1. BKS Iyengar, Light of Yoga, JP, 1st Ed, 2012.

Reference:

1. PayalGidwaniTiwari, Body Gaurders, CBS, 2nd Ed, 2009

EFFECTIVE ENGLISH

Theory Hours: 60
Total Hours: 60

Course Objective:

The objectives of this course is that after 40 hours of lectures, demonstrations and practicals the student will be able to Speak fluently, intelligibly and appropriately to teachers, Colleagues, Doctors, Patients and friends at the college, Hospital and hostel etc. about academic or (occupational) areas of interest. Course Outcome:

1. Students can gain knowledge about the various traditions writer and followed in English
2. Individuals can gain self – confidence in their own voice and speak out their opinions with confidence
3. Students will gain the ability to become a accomplished active readers
4. Helps to build the knowledge and understanding simultaneously through listening and give their point of view
5. Students will be able to write effectively in variety of professional and social setting
6. Acquire the ability to read and understand the literature and have the ability to identify the topics and formulate questions
7. Good communication skills which helps in easy rapport between the patient and therapist
8. Gain the fluency in speaking which helps in easy teaching method and presentation

UNIT – I INTRODUCTION

1. History of the language
2. Regional distribution
3. Variation in dialect and accent

UNIT – II PHONOLOGY

1. Consonants and vowels
2. Phontactics
3. Stress, rhythm and intonation
4. Regional variation

UNIT – III GRAMMER

1. Noun, Pronoun
2. Verb, Tense
3. Adjuncts
4. Adjectives

UNIT – IV SYNTAX

1. Clause syntax
2. Auxillary verbs
3. Vocabulary
4. Word formation
5. Pronounciation

UNIT – V PRESENTATION

1. Oral presentation & Panel discussion
2. Interview preparation
3. Clarity and specificity

Text Book:

1. O' Connor, I.D., Better English Pronunciation - Cambridge, Cambridge University.2009

Reference:

1. Water F.V.A , Proficiency Course in English – Hodder and Stronghton, London.1994
2. Tone Daniel, I.M. , English Pronouncing Dictionary –Dent and sons Ltd. London.2004

HEALTH CARE

Theory Hours: 50
Total Hours: 50

Introduction to Health

1. Definition of Health, Determinants of Health, Health Indicators of India, Health Team Concept.
2. National Health Policy
3. National Health Programmes (Briefly Objectives and scope) Population of India and Family welfare programme in India

Introduction to Nursing

1. What is Nursing? Nursing principles. Inter-Personnel relationships. Bandaging: Basic turns; Bandaging extremities; Triangular Bandages and their application.
2. Nursing Position, Bed making, prone, lateral, dorsal, dorsal re-cumbent, Fowler's positions, comfort measures, Aids and rest and sleep.
3. Lifting and Transporting Patients: Lifting patients up in the bed. Transferring from bed to wheel chair. Transferring from bed to stretcher.
4. Bed Side Management: Giving and taking Bed pan, Urinal: Observation of stools, urine. Observation of sputum, understand use and care of catheters, enema giving.
5. Methods of Giving Nourishment: Feeding, Tube feeding, drips, transfusion Care of Rubber Goods
6. Recording of body temperature, respiration and pulse, Simple aseptic technique, sterilization and disinfection. Surgical Dressing: Observation of dressing procedures

First Aid:

1. Syllabus as for Certificate Course of Red Cross Society of St. John's Ambulance Brigade.

Reference Books:

1. Preventive and Social Medicine by J.Park
2. Text Book of P & SM by Park and Park
3. Counseling& Communicate skills for medical and health, Bayne- Orient Longman Pvt. Ltd.

Constitution of India

Theory Hours: 50
Total Hours: 50

Unit-I:
Meaning of the term 'Constitution'. Making of the Indian Constitution 1946- 1950.

Unit-II:
The democratic institutions created by the constitution Bicameral system of Legislature at the Centre and in the States.

Unit-III:
Fundamental Rights and Duties their content and significance.

Unit – IV:
Directive Principles of States Policies the need to balance Fundamental Rights with Directive Principles.

Unit – V:
Special Rights created in the Constitution for: Dalits, Backwards, Women and Children and the Religious and Linguistic Minorities.

Unit-VI:
Doctrine of Separation of Powers legislative, Executive and Judicial and their functioning in India.

Unit – VII:
The Election Commission and State Public Service commissions.

Unit – VIII:
Method of amending the Constitution.

Unit – IX:
Enforcing rights through Writs:

Unit – X:
Constitution and Sustainable Development in India.

Reference Books:

1. J. C. Johari: The Constitution of India- A Politico-Legal Study-Sterling Publication, Pvt. Ltd. New Delhi.
2. J. N. Pandey: Constitution Law of India, Allahbad, Central Law Agency, 1998.
3. Granville Austin: The Indian Constitution – Corner Stone of a Nation-Oxford, New Delhi, 2000.