REVISED UG SYLLABUS UNDER CBCS

(Implemented from Academic Year - 2020-21)

PROGRAMME: FOUR YEAR B.SC. (Hons)

Domain Subject: PARAMEDICALTECHNOLOGY

Skill Enhancement Courses (SECs) for Semester V, from 2022-23

(Syllabus with Learning Outcomes, References, Curricular & Co-curricular activities & Model Q.P. Pattern)

Structure of SECs for Semester–V

(To choose one pair from the three alternate pairs of SECs)

Univ Code	Course Number 6&7	Name of Course	Hours/Week Theory +Practical	Credits Theory+ Practical	Marks	
					IA–20 FW- 05	Sem End T+P
	6A	GENERAL MICROBIOLOGY	3+3	3+2	25	75+50
	7A	APPLIED MICROBIOLOGY	3+3	3+2	25	75+50

OR

Univ Code	Course Number 6&7	Name of Course	Hours/Week Theory +Practical	Credits Theory+ Practical	Marks	
					IA–20 FW- 05	Sem End T+P
	6B	BASIC AND CLINICAL PHARMACOLOGY	3+3	3+2	25	75+50
	7B	COMMUNITY MEDICINE	3+3	3+2	25	75+50

OR

Univ Code	Course Number 6&7	Name of Course	Hours/Week Theory +Practical	Credits Theory+ Practical	Marks	
					IA–20 FW- 05	Sem End T+P
	6C	IMMUNO HEMATOLOGY, AND COMPUTER APPLICATIONS	3+3	3+2	25	75+50
	7C	BIOMEDICAL INSTRUMENTS AND LAB MANAGEMENT	3+3	3+2	25	75+50

Note: For Semester–V, for the domain subject paramedical technology, any one of the three pairs of SECs shall be chosen as courses 6 and 7, i.e., 6A & 7A or 6B & 7B or 6C & 7C. The pair shall not be broken (ABC allotment is random, not on any priority basis).

BOS chairman

BOS Member

MARKET ORIENTED COURSE

SUBJECT: PARAMEDICAL TECHNOLOGY

III YEAR - SEMESTER-V

Max. Marks: 100+50 -Credits: 05

Course 6A: GENERAL MICROBIOLOGY

I. Learning Outcomes:

Students at the successful completion of this course will be able to

- Develop media preparation and bacterial culture techniques.
- Develop staining techniques
- Identify bacteria.
- Get knowledge about antimicrobial agents

UNIT-I

Bacteriological Media & Culture Techniques: Introduction of culture media; Basic requirements & uses of culture media; Classification of culture media: Based on their consistency (solid, liquid, semisolid), Based on constituents/ingredients (simple, complex, synthetic or defined, special), Based on Oxygen requirement (aerobic & anaerobic media); Indication of culture media; Types of culture methods (streak culture, stab culture, pour plate method, broth culture); Anaerobic culture methods: Displacement Method, Chemical or biological method, Reduction of Oxygen; Automated methods (Bactec- blood culture method).

UNIT-II

Stains used in Microbiology: Introduction of stain; Importance of stain in microbiology; Types of stain in detailed giving example- Simple stain, differential stain, negative stain, impregnation method; Special staining for certain bacteria, bacterial spores, parasites & fungi; Principle, procedure, application & result interpretation of Gram staining & Ziehl Neelsen staining.

UNIT-III

Methods of Identification of Bacteria: Brief introduction of how bacteria is identified in pure culture; Identification of the bacterium by staining reactions; Identification of the bacterium by

cultural characteristics; Identification by fermentation & other biochemical properties (Sugar fermentation, Litmus milk, Indole production, Methyl Red test (MR).

UNIT-IV

Methods to Control Microorganism: Introduction & definition of sterilization, disinfection, antiseptics, bactericidal agents, bacteriostatic agents and decontamination; Methods of sterilization: Physical agents – sunlight, drying, filtration, radiation, ultrasonic and sonic vibrations; Types of drying: dry heat(flaming, incineration, hot air) & moist heat (pasteurization, boiling) - Chemical agents- alcohols, Aldehydes, dyes, halogens, phenols, surface active agents, metallic salts, gases; Control of sterilization- physical, chemical & biological control; Types of disinfectants.

UNIT-V

Anti-microbial Agents & Sensitivity Testing: Introduction of antimicrobial agents & sensitivity testing; Meaning, definition of anti-microbial agents; Ideal qualities of an antimicrobial agent; Mechanism of action of anti-microbial drugs; Resistance of bacteria to antimicrobial drugs.

****

ADDITIONAL READINGS:

A. Pelczar Mj, Chan ECS, Kleig NR. 1993. Microbiology, Tata McGraw Hill.

B. LM Prescott, 2002. Microbiology, 10th ed. McGraw Hill.

C. Stuart Hoggy, 2005. Essential Microbiology, Wiley.

GENERAL MICROBIOLOGY PRACTICALS

1. Staining Techniques.
2. Media for Routine Cultivation of Bacteria.
3. Culture Techniques.
4. Control of Microbial Growth.
5. Antibiotic Susceptibility test

MARKET ORIENTED COURSE

SUBJECT: PARAMEDICAL TECHNOLOGY

III YEAR - SEMESTER-V

Max. Marks: 100+50 -Credits: 05

Course7A: APPLIED MICROBIOLOGY

I. Learning Outcomes:

Students at the successful completion of this course will be able to

- Get the knowledge in maintenance of micro biology laboratory
- Develop techniques in examination of different specimens.
- Knowledge related to performance of tests
- Know Management of Biomedical Waste.

UNIT-I

Managing Microbiology Laboratory: General concept on Managing microbiology - Laboratory organization, Laboratory Operations Manual, Recording of specimen and Laboratory Records, Recording of results; Care and maintenance of glassware - Recommended Glassware Cleaning and Handling Procedures, Heating Glassware, Maintenance of Laboratory Equipment; Quality control in microbiology - Ordering and Storage of Dehydrated Media, Stains and Reagents, Diagnostic Antigens and Antisera.

UNIT-II

Technique Oriented Examination of Specimen: Macroscopic and microscopic examination of the specimen - Pus, Urine, Stool, Sputum & throat swab; Wet and Dry Mount Techniques - Wet Mount Slide, Dry Mount Slide.

Body Fluids Examination: Brief discussion; Urine examination - routine physical, chemical and microscopic examination of urine - method of collection, normal constituents, physical examination & chemical examination; Stool examination - routine, naked eye and microscopic examination of stool and study of parasitic ova and cysts in the stool: method of collection, normal constituents & appearance, abnormal constituents.

UNIT-III

CSF examination - physical, chemical and microscopic examination, cell count and staining; Sputum examination - collection and examination, examination of malignant cells in the sputum, stains commonly used to detect bacteria in sputum gram staining. Mantoux test in Mycobacterium tuberculosis.

UNIT-IV

Epidemiology of Infectious Disease: Introduction; Meaning and definition of Epidemiology - Definition of Infectious Diseases, Sources and Types of Infections; Types of Diseases - Epidemic, Endemic, Pandemic, Control and prevention of diseases.

UNIT-V

Healthcare Associated Infections: Healthcare Associated Infections - Types of healthcare associated infection; Nosocomial Infections (Hospital Infection) - Sources and types of nosocomial infections, Symptoms and Diagnosis, Prevention and Treatment. Management of Biomedical Waste - Types of biomedical waste and their sources, Types of Hospital Risk Wastes.

****

References:

A. Chernecky, Cynthia C., and Barbara J. Berger. Laboratory Tests and Diagnostic Procedures, 3rd

ed. Philadelphia, PA: W.B. Saunders Company, 2001.

B. Bauman, R. (2004) Microbiology. Pearson Benjamin Cummings.

APPLIED MICROBIOLOGY PRACTICALS.

1. Complement Fixative Test (CFT).
2. Examination of Skin, Nail and Hair for Fungi.
3. Bacterial Culture of Urine.
4. Examination of Sputum Specimen.
5. Bacterial & Fungal Culture - Throat Swabs.
6. ELISA.
8. Rapid Detection of Hepatitis B Surface Antigen (HBsAg).

MARKET ORIENTED COURSE

SUBJECT: PARAMEDICAL TECHNOLOGY

III YEAR - SEMESTER-V

Max. Marks: 100+50 -Credits: 05

Course 6B: BASIC AND CLINICAL PHARMACOLOGY

I. Learning Outcomes:

Students at the successful completion of this course will be able to

- Understand general pharmacological aspects.
- Know action of drugs on different systems of human body.
- Know about analgesics.
- Understand about drug addiction and drug abuse.

UNIT-I

General Pharmacology: Pharmacology; Different branches of Pharmacology; Routes of drug administration; Absorption, Distribution, Metabolism and excretion of drugs; General mechanism of drug action; Animal used in experiments; Animal handling and ethics; Bioassay procedures; Basics of Clinical trials.

UNIT-II

Drugs Acting on CNS: General anesthetics; Anxiolytic and hypnotic drugs; Psychotropic agents; Epilepsy and Anticonvulsant drugs; Narcotic analgesics and antagonists; Centrally acting muscle relaxation and antiparkinsonism agents; Analgesics; antipyretics; anti inflammatory agents and Central nervous system stimulant; Local anesthetics.

UNIT-III

Drugs Acting on ANS: Cholinergic or parasympathetic drugs; Anticholinergic or para sympathomimetic drugs; Adrenergic or sympathomimetic drugs; Sympatholytic drugs; Drugs acting on autonomic ganglion; Neuromuscular blockers.

Drugs Acting on Respiratory System: Bronchodilators; analeptics; Nasal decongestants, expectorants; antitussive agents.

Drugs acting on Cardiovascular System: Antiarrhythmic drugs; Cardiotonics; Antianginal drugs; Antihypertensive drugs; Drugs used in atherosclerosis.

UNIT-IV

Drugs Acting on Blood and Blood Forming Organs: Haematinics – Iron (Fe); Coagulants; Anticoagulants; Blood and plasma expanders.

Hormones and Hormone Antagonists: Antithyroid drugs; Hypoglycaemic agents; Sex hormones and oral contraceptives; Corticosteroids.

UNIT-V

Opioid Analgesics: Endogenous opioid peptides; Opioid receptors; Effects of clinically used opioids; Morphine and related opioid agonists; Acute opioid toxicity; Opioid agonist & antagonist; Therapeutic uses of opioid analgesics.

Drug Addiction and Drug Abuse: Drug dependence; Physical dependence on Drugs; Clinical issues.

****

ADDITIONAL READINGS:

A. Basic and Clinical Pharmacology, Bertram G. Katzung, McGraw-Hill Medical, 2007.

B. Pharmacology, 2/e, Bhattacharya, Elsevier, 2nd edition – 2003.

C. Desk Reference of Clinical Pharmacology, Second Edition, Manuchair Ebadi, 2007.

D. Ghosh MN. Fundamentals of Experimental Pharmacology. Hilton & Company, E. Kolkata.

E. Kulkarni SK. Handbook of experimental pharmacology. VallabhPrakashan,

PRACTICAL SYLLABUS

1. Introduction to experimental pharmacology.
2. Commonly used instruments in experimental pharmacology.
3. Study of common laboratory animals.
4. Maintenance of laboratory animals as per CPCSEA guidelines
5. Common laboratory techniques. Blood withdrawal, serum and plasma separation, anesthetics and euthanasia used for animal studies.
6. Study of different routes of drugs administration.

7. Study of diuretic activity of drugs.
8. Study of Effect of drugs on blood pressure.
9. Study of local anesthetics by different methods.

Note: All laboratory techniques and animal experiments are demonstrated by simulated experiments by softwares and videos.

1.Ghosh MN. Fundamentals of Experimental Pharmacology. Hilton & Company, Kolkata.
2. Kulkarni SK. Handbook of experimental pharmacology. VallabhPrakashan,

MARKET ORIENTED COURSE

SUBJECT: PARAMEDICAL TECHNOLOGY

III YEAR - SEMESTER-V

Max. Marks: 100+50 -Credits: 05

Course 7B: COMMUNITY MEDICINE

I. Learning Outcomes:

Students at the successful completion of this course will be able to

- Understand causes for disease, transmission and prevention.
- Get knowledge about nutritional and infectious diseases.
- Understand health services and health programs providing by government.
- Understand Demography & Biostatistics.
- Know about health education.

UNIT-I

Disease: Causes, Transmission and prevention Determinants of health, multi – factorial causation of disease; host, agent, and environment relationship; Air – borne, vector and vehicle transmission; Methods of control with examples for control of each mode. primary, secondary and tertiary levels of prevention with examples related to few diseases of national importance.

UNIT-II

Nutritional & Infectious Diseases: Nutritional Diseases - Definition and brief discussion; Protein energy malnutrition - Marasmus, Kwashiorkor, and Vitamin deficiency disorders; Classification with specific examples; Disorders of Mineral metabolism such as a) zinc, b) calcium. Infectious Diseases - Bacterial diseases: Pyogenic, Typhoid, Diphtheria, Bacillary dysentery, Rickettsia,Viral diseases: Poliomyelitis, Herpes, Rabies, Measles, HIV infection, Fungal disease and opportunistic infections, Parasitic diseases: Malaria, Filaria, Amoebiasis, Cysticercosis.

UNIT-III

Health Services: Brief description of organization of health services at the centre and state levels; Primary Health Care - Definition, components and principles of primary health care; Health for all indicators; Primary Health Centre functions.

Health Programmes - Family Welfare Programme, National Programme for water supply and sanitation, Nutritional Programmes, Immunization and universal immunization programme; Disease Eradication programme - Leprosy & Guniea worm; Disease control programmes - Tuberculosis, Malaria, Filaria, S.T.D, Goitre, Cholera and other diarrhaeal diseases and National Programme for prevention of blindness including trachoma.

UNIT-IV

Demography & Biostatistics: The factors influencing population growth, death rate, birth rate and methods of contraception.

Application of statistical principles in history; Presentation of data, calculation of mean, median and mode, range and standard deviation and their significance; Significance of 'T' test, Chi square values.

UNIT-V

Health Education: Definition, principles, objectives, purpose, types and AV aids;

Communication - definition, process and types, Behavioral change communication; IEC (Information education and communication) - aims, scope, concept and approaches; Inter personal relationship - Co-ordination and co-operation in health education with other members of the health team; Teaching and learning process, concept, characteristics of leaner and educator; Role and skill of health professional in Health Education.

****

ADDITIONAL READINGS:

A. Wise Geek. "What is the difference between communicable and non-communicable disease? Conjecture Corporation 2008.

B. Duffy, FD. Gordon, GH., Whelan, G., Cole-Kelly, K., & Frankel R. Assessing competence in communication and interpersonal skills: The Kalamazoo II report. Academic Medicine, 79, 495 – 507.

C. "Health Centres the Next Step". Socialist Health Centres. 1975 Retrieved 18 October 2014.

COMMUNITY MEDICINE PRACTICALS

1.Identification of nutritional deficiency disorders through pictures.

2.Identification of bacterial diseases.

3.Identification of Fungal diseases

4.identification of parasitic diseases.

5.case study of any one of the infectious diseases.

MARKET ORIENTED COURSE

SUBJECT: PARAMEDICAL TECHNOLOGY

III YEAR - SEMESTER-V

Max. Marks: 100+50 -Credits: 05

COURSE 6C: IMMUNOHEMATOLOGY, AND COMPUTER APPLICATIONS

Learning Out comes

Students at the successful completion of this course will be able to

- Understand the functioning of the blood bank
- Get awareness regarding blood donation and its significance
- Get ICT awareness.
- Create their own blogs for purpose of sharing information and knowledge
- Understand regarding the significance of youtube videos.

UNIT-I

Immunohematology: Principles of blood groups & antigen antibody reactions. Genetics in blood banking - ABO & Rh blood group systems, Other red cell antigens & their antibodies-clinical significance. Coombs tests- significance. Antibody identification. Haemolytic disease of new born. Blood donor selection, screening.

UNIT-II

Blood collection & preservation including cryopreservation. Blood components, preparation, indications, storage and autologous transfusions. Transfusions in transplantation, neonatology. Blood substitutes. Blood donor motivation. Auditing in blood banks. Quality assurance in blood banking practices. HLA - theory importance in transplantation, disease associations & basic techniques used in tissue typing.

UNIT-III

Blood bank maintenance: Collection and Handling of Blood- Standardise procedure, phlebotomy tray, Blood film preparation, differences between capillary and venous blood, Anticoagulant used. Storage of blood and its transportation, effects of storage on Blood count and Blood morphology.

Blood component separation- principles, preparation & uses. Apheresis: An overview. Disorders of mismatched blood transfusion. Wastage of blood units- possibilities.

UNIT-IV

First Aid Acting in an Emergency -The Human Body Assessing the Victim - Cardiopulmonary Resuscitation (CPR) -Automated External Defibrillators (AED)- Airway Obstructions -Controlling Bleeding -Shock Wounds and Soft Tissue Injuries - Burns Head and Spinal Injuries- Chest, Abdominal and Pelvic Injuries. Bone, Joint and Muscle Injuries- Extremity Injuries and Splinting- Sudden Illness- Poisoning Substance- Misuse and Abuse -Bites and Stings- Cold and Heat Emergencies -Rescuing and Moving Victims.

UNIT-V

Basic Computer Skills:

Word Processing Concepts; Working with Documents - Create a New Document, medical document preparation, discharge summary preparation. Excel- data analysis.

Internet and Email: Use of Internet and Email; Internet – Protocols, Routing; Websites; The Mail Protocol Suite; Using Search Engine; Uploading and Downloading of Files and Images; E-mail ID creation - Sending Messages, and Attaching Files in E-mails. Online tool usage.

Hospital Information System: Hospital Information System; Architecture of a Hospital Information System; Aim and Uses of HIS.

****

Immunohematology, and computer applications Practicals

1. Identification of blood groups.

2. Detailed study on first aid mechanisms.

4. Creation of E-mail ID.

5. Creation of Blog.

6. Uploading youtube videos.

ADDITIONAL READINGS:

1.Modern blood banking and transfusion practices by Denise M. Harmenting, 5,th Ed.

2. Transfusion medicine technical manual-DGHS, Ministrv of Hearth and Family welfare, Govt. of india second edition 2003.

3. Blood transfusion in clinical medicine by pL Mollison.

4. AABB Technical Manual, 17 th Ec. AABB.

5. Compendium of transfusion medicine, RN Makroo.

6. Practical Hematology, J A Dacie and S M lewis.

7.Sunny Handa, "Fundamentals of Information Technology", LexisNexis Butterworths.

8.Graeme G. Wilkinson, "Fundamentals of Information Technology", Wiley.

9.Ramesh Bangia, "Computer Fundamentals and Information Technology", Firewall Media.

WEB LINKS:

A. http://oer.nios.ac.in/wiki/index.php/COMPUTER_ANT_ITS_COMPONENTS

B. http://http://homepage.cs.uri.edu/book/cpu_memory/cpu_memory.htm.

C. http://uwf.edu/clemley/cgs1570w/notes/concepts-7.htm

MARKET ORIENTED COURSE

SUBJECT: PARAMEDICAL TECHNOLOGY

III YEAR - SEMESTER-V

Max. Marks: 100+50 -Credits: 05

Course 7C: BIOMEDICAL INSTRUMENTS AND LAB MANAGEMENT

. Learning Outcomes:

Students at the successful completion of this course will be able to

- Understand working principle and maintenance of laboratory instruments.
- know procedure for effective maintenance of laboratory.
- Get the knowledge of laboratory safety.
- Be ethical in laboratory medicine.

UNIT-I

Biomedical Instruments I: Working principle and maintenance of common laboratory instruments-heating mantle, refrigerator, deep freezer, walk-in cooler, electronic balance, CRO, Multimeter, Calorimeter, Incubator, Laser application in medicine, maintenance of equipments-preventive maintenance and break down maintenance, calibration of equipments, Electrodes, pressure transducers.

UNIT-II

Biomedical Instruments II: EEG Recorder, EMG Machine, NCV and evoked potential recording, surgical diathermy, suction apparatus, Echo Encephalography, Ventilators, Nebulizer, humidifier, Spiro meter, multiparameter monitor; Normal ECG, ECG abnormalities, ECG recorder-single channel, multichannel, Tread mill ECG, ECG monitor, cardiac defibrillator, pacemaker, digital subtraction angiography; Oxymetry-transmission oximetry, reflection oximetry, fingertip Pulse oximeter, Eco cardiography, colour Doppler, Heart lung machine, infusion pump, blood gas analyzer.

UNIT-III

Laboratory Management I: Preparation of operating budgets; general aspects of financial management of laboratories; Cost-analysis (tests and instruments); justification of providing new services or rejecting existing ones; lease and purchase decision analysis; delegation of budget responsibilities, work load statistics.

UNIT-IV

Laboratory Management II: Laboratory safety: Fire, chemical, radiation and infection control (body substance precautions), hazardous waste and transport of hazardous materials. Maintenance of records: Procedure manuals, ward manuals, quality control programs, patient data retrieval; Personnel management: Personnel policy manual; job descriptions; labor, supervision relations; conducting job interviews; motivation, recognizing job distress syndrome; delegation to a laboratory manager; Hospital organization; interactions between the laboratory service and the rest of the hospital.

UNIT-V

Ethics in Laboratory Medicine: Principles of ethics; General application of ethical

principle; Collection of specimen; performance of tests; Reporting of results; Storage and retention of medical records; Access to medical records.

****

BIOMEDICAL INSTRUMENTS, LAB MANAGEMENT PRACTICAL

Study of Different Bio Medical Instruments

1.EEG recorder

2.ECG recorder

3.Echo cardiography

4.Treadmill

5.Pulse oximeter

6.Colour Doppler

7.Blood gas analyzer

8.Spirometer

ADDITIONAL READINGS:

A. Sarah Jane Pitt, James M. Cunningham, "An Introduction to Biomedical Science in Professional and Clinical Practice?, John Wiley & Sons, 6 April 2009 Medical.

B. Barbara H. Estridge, Anna P. Reynolds, Norma J. Walters, "Basic Medical Laboratory Techniques", Cengage Learning, 2000.

C. "Research Training in the Biomedical, Behavioural and Clinical Research Sciences" National Academics Press, 28 Feb 2011.

WEB LINKS:

A.http://www.mdx.ac.uk/courses/postgraduate/biomedical-science-clinical-biochemistry.

B. http://www.uthsc.edu/grad/PROGRAMS/BCLRMMO.php.

C. http://www.unimib.it/go/46156/Home/English/Academic-Programs/Medicine-and-Surgery/Biomedical-Laboratory-Techniques

GENERAL CURRICULAR ACTIVITIES

Lecturer-based:

1) **Class-room activities**: Organization of Group discussions, question-answer sessions, scientific observations, use of audio-visual aids, guidance programmes, examination and evaluation work (scheduled and surprise tests), quizzes, preparation of question banks, student study material, material for PG entrance examinations etc.

2) **Library activities**: Reading books and magazines taking notes from prescribed and reference books and preparation of notes on lessons as per the syllabus; Reading journals and periodicals pertaining to different subjects of study; Making files of news-paper cuttings etc.

3) **Lab activities**: Organization of practicals use of virtual laboratory , maintenance of lab attendance registers/log registers, maintenance of glassware and chemicals

4) **Activities in the Seminars, workshops and conferences**: Organization of at least one seminar/workshop/conference per academic year either on academic/research aspects and inculcate research spirit among students

5) **Research activities**: Student study projects (General / RBPT model), Minor or Major research projects, Research guidance to research scholars, Publication of research articles/papers (at least one in 2 years) in UGC-recognized journals, Registration in Vidwan/Orcid/Scopus/Web of Science

6) **Smart Classroom Activities**: Organization of Departmental WhatsApp groups, Ed Modo groups/Google Class Rooms/Adobe Spark groups for quick delivery of the subject; Preparation of Moocs content & presentation tube lessons by trained lecturers; Using smart/digital/e- class rooms (mandarory) wherever present; Utilization of YouTube videos (subject to copy rights) etc.

Student-based:

1) **Class-room activities**: Power point presentations, seminars, assignments

2) **Library activities**: Visit to library during library hour and preparation of notes

3) **Lab activities**: Maintenance of observation note book and record, keeping lab clean and tidy

4) **Activities in the Seminars, workshops and conferences**: Participation/presentation in seminar/workshop/conference

CO-CURRICULAR ACTIVITES

OBJECTIVES:

The co-curricular activities are aimed at strengthening the theoretical knowledge with an activity related to the content taught in the class room. The aesthetic development, character building, spiritual growth, physical growth, moral values, creativity of the student.

The different types of co-curricular activities relevant to Sericulture domain are listed below:

Academic – based

- Preparation of Charts/Clay or Thermocol Models
- Debates, Essay Writing Competitions
- Group Discussions
- Departmental magazine
- Formation of Book clubs
- Paramedical importance album-making
- Viva-Voce

Lab/Research –based

- Documentaries
- Field Visit/Excursions/to Paramedical centres
- Training at paramedical centres
- Exposure to scientific instruments and hands-on experience

Value - based

- Organization of works shop with the doctors from the primary health centres for awareness on the role of paramedics in the Medical & health sector

Question Paper Pattern

Four – year B.Sc.(Hons)

Domain Subject: PARAMEDICAL TECHNOLOGY

III Year B. Sc.(Hons)–Semester –V

Max.Marks: 75 **Time: 3 hrs**

SECTION - A (Total: 10 Marks)

Very Short Answer Questions **(10 Marks: 5x2)**

1. .....
2. .....
3. .....
4. .....
5. .....

SECTION - B (Total: 5x5=25Marks)

(Answer any Five questions. Each answer carries 5 marks)

(At least 1 question should be given from each Unit)

6. .....
7. .....
8. .....
9. .....
10. .....
11. .....
12. .....
13. .....

SECTION -C(Total: 4x10 = 40 Marks)

(Answer any four questions. Eachanswercarries10 marks

(Atleast1questionshould be given from each Unit)

14. .....
15. .....

16. .....

17. .....

18. .....

19. .....

****

Syllabus Prepared by

1.Sri.G.L.N. Prasad, Lecturer in Zoology, SVGM GDC Kalyandurg.

2. Dr.B. Sreedevi, Lecturer in Zoology, SVGM GDC Kalyandurg.
