

## DEPARTMENT DETAILS

### Introduction/Overview

Physiology is the vital bridge between basic science and clinical practice.

The Foundation: It explains how the body functions, from cellular mechanisms to complex organ systems like the heart, lungs, and brain.

- Theory to Practice: Modern labs and high-fidelity simulators turn abstract concepts into hands-on clinical skills, such as reading ECGs or testing lung function.
- Innovative Learning: Moving beyond lectures, departments use interactive methods like Problem-Based Learning (PBL) to make complex topics stick.
- Clinical Relevance: Every lesson emphasizes diagnosis and treatment, showing students how normal function shifts during illness.
- A Hub of Discovery: Through research and mentorship, it fosters the curiosity and discipline needed for the future of medicine.


### Vision/Objectives



- To provide best of teaching and quality education to students.
- To upgrade the department with most modern teaching and learning aids.
- To develop interest in research oriented activities among students



### Mission/Goal

- ✓ To make medical undergraduates of today as expert, skilled, intelligent, humble, empathic and competent medical health providers of tomorrow.

### List of Teaching Faculties

Sr. No.	Name of Faculty	Designation	Qualification	Total Teaching Experience	Photo
1	Dr.Umesh Pralhadrao Lad	Professor & HOD	MBBS MD Physiology	15 years	

2	Dr Monica Suresh Yunati	Associate Professor	MBBS MD Physiology	12 years	
3	Dr. Amruta Ambadasrao Dudhekar	Tutor/Demonstrator	MBBS DGO	2 M	

4	Dr. Mayuri Kashinath Hengne	Tutor/Demonstrator	MBBS	1 M	
5	Dr Kiran Vitthal Sondge	Tutor/Demonstrator	MBBS	1M	

### List of Non-Teaching Staff

Sr. No.	Name	Post
1	Sanjay Pathrud	Clerk
2	Manisha Daure	Laboratory Technician

### Activities by Department

- Teaching -- Undergraduate Medical Students
  - Scientific Orientation Sessions for College Students
- Best Practices/ facilities/Services offered by Department (If any)**
- Virtual practical module for amphibian experiments for better understanding of students.

**List of Publications and Research (Faculty wise)**

Sr. No.	Title	Authors From the institute	Departments of authors	Journal details	Indexing agency
1	Correlation between obesity & ABO Blood Group in School going Children in India 2012	Dr.Umesh Pralhadrao Lad Professor and HOD	Physiology	Indian Journal of Basic & Applied Medical Research; September 2012: Vol.-1, Issue: 4, P. 280-284	
2	STUDY OF RISK FACTORS AND FETO-MATERNAL OUTCOMES IN PREMATURE RUPTURE OF MEMBRANE (PROM): A SINGLE CENTRE PROSPECTIVE OBSERVATIONAL STUDY		Physiology	European Journal of Biomedical and Pharmaceutical Sciences <i>ejbps</i> , 2021, Volume 8. Issue 10, 318-322.	
3	A Study on the Correlation Between the Body Mass Index (BMI), the Body Fat Percentage, the Handgrip Strength and the Handgrip Endurance in Underweight, Normal Weight and Overweight Adolescents 2013		Physiology	Journal of Clinical and Diagnostic Research. 2013 January, Vol-7(1): 51-54	
4	Correlation Between Body Mass Index (BMI), Body Fat Percentage and Pulmonary Functions in Underweight, Overweight and Normal Weight Adolescents 2012		Physiology	Journal of Clinical and Diagnostic Research (JCDR)2012;350-353 DOI: JCDR/2012/4062:2062	
5	Effect of two hours formaldehyde exposure on lung functions in the 1st MBBS medical students		Physiology	Applied Physiology and Anatomy Digest (Medworld-asia International Publishers) September 2018 (3) 02, 15 - 20	
6	EFFECT OF CLASSICAL MUSIC (Rag Bilahari) ON REACTION TIME AND BLOOD PRESSURE		Physiology	International Journal of Scientific Research 2020 Volume - 9   Issue - 8   August - 2020	
7	Medical students of today, practitioners of tomorrow; are they listening?		Physiology	Asian Pacific Journal of Health Sciences <i>Asian Pac. J. Health Sci.</i> , 2014; 1(4S): 35-39	

8	MATERNAL AND PERINATAL OUTCOME IN CASES OF ABRUPTIO PLACENTA AT A TERTIARY CARE INSTITUTE OF WESTERN INDIA - THREE YEAR RETROSPECTIVE STUDY		<b>Physiology</b>	European Journal of Biomedical and Pharmaceutical Sciences <i>ejbps</i> , 2021, Volume 8, Issue 7, 382-386.	
9	Assessment of learning style of preclinical medical students using VARK: an endeavor to increase efficacy of teaching learning strategies		<b>Physiology</b>	Indian Journal of Basic and Applied Medical Research; March 2018: Vol.-7, Issue- 2, P. 471-477	

Sr. No.	Title	Authors From the institute	Departments of authors	Journal details	Indexing agency
1	A multicentre pharmacoepidemiological study of dermatological disorders in Wardha district.	Dr Monica Suresh Yunati Associate Professor	Physiology	Int J Basic Clin Pharmacol 2013;2:751-6	Pub Med Central
2	Dynamics of heart rate induced by sahaja yoga meditation in healthy normal subjects above 40 years.		Physiology	Natl J Physiol Pharm Pharmacol 2014; 4:80-85.	Index Copernicus
3	Sahaja yoga meditation as a tool to enhance aging pulmonary functions.		Physiology	Natl J Physiol Pharm Pharmacol 2017;7(3):333-338.	Index Copernicus
4	Comparative effect of treadmill exercise and yoga on Superoxide dismutase level in normal young adults		Physiology	International Journal of Physiology, Nutrition and Physical Education 2017; 2(1): 167-170	Academic.edu
5	Differential influence of age on Autonomic Reactivity - A Comparative Study.		Physiology	Applied Physiology and Anatomy Digest September 2018 (3) 02, 5- 14	Index Copernicus

6	Evaluating the impact of a structured mentorship program on medical students: a crosssectional feedback analysis.		Physiology	J Heart Valve Dis. 2025;30(7):127-132.	Embase
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## Achievements/ Awards

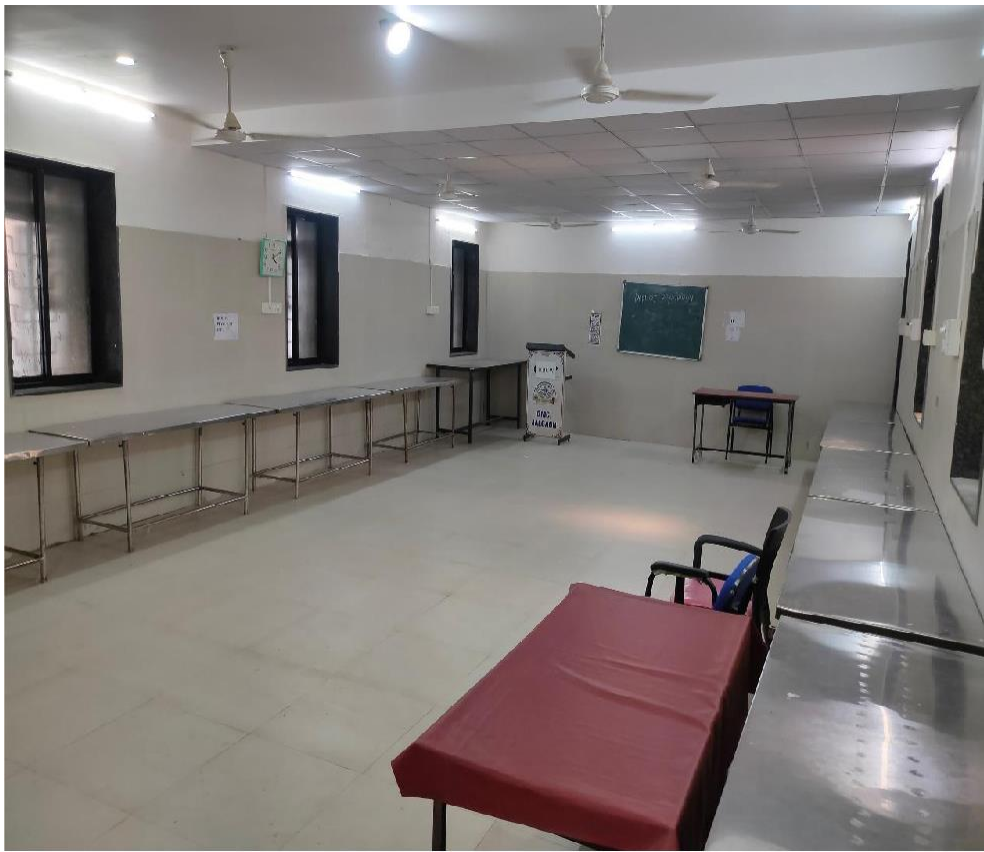
### Photo Gallery



*Hematology lab*



**Demonstration Room**



***Clinical lab***

Previous HODs of Department

<u>Sr. No</u>	<u>Name of the Head of Department</u>
<u>1</u>	<u>Dr. Afroz Afsan</u>
<u>2</u>	<u>Dr. Girish Thakare</u>

List of Laboratory equipment

1.	Binocular Microscope
2.	Monocular Microscope
3.	Magnus Microscope
4.	Haemocytometer
5.	Hb meter
6.	Apparatus for passive Movement
7.	Compass Aesthesiometer
8.	Perimeter priestly smith
9.	Spirometer,ordinary
10.	Algometer
11.	Stethograph
12.	Voltage stabilizer
13.	Von frey hair Aesthesiometer
14.	Van Slyk's Apparatus Manometer
15.	Stag Incubator Electric Co2 Mix Stage
16.	Physiograph 3 Channel
17.	Physiograph single Channel
18.	Myograph Stand
19.	Muscle Trough
20.	Muscle Lever
21.	Hook and Weight Set
22.	Heart Lever Starling
23.	Frog Board Disspection
24.	Frog board crok linked with boss head
25.	Low Bolt unit
26.	Electrodes
27.	X - Blocksh
28.	Demonstration Eye - piece
29.	Basal metabolism Apparatus
30.	Mosso. S. Ergogratch
31.	Parameter with Chart
32.	Ophthalmoscope
33.	Color Perception Lantern Edridge Green
34.	Newton's Color Wheel
35.	Tuning Fork Test Hearing 32 - 10000 CTS
36.	Dynamometer
37.	OTO Rhino Laryngoscope
38.	Electronic Stimulator
39.	Urino Meter (Mercury Based Instruments) to be Rept.
40.	Kymograph student Electric Independent Unit

41.	Kymograph with drum
42.	Automatic BP apparatus
43.	Manual BP apparatus
44.	Enamel tray
45.	Spirit lamps
46.	Westergren's pipette for ESR on stand
47.	Wintrobe's pipette for ESR
48.	Stethoscopes
49.	Stethoscopes, demonstration with multiple ear pieces
50.	Clinical thermometer (Mercury Based)
51.	Water distillation steel with spare heating elements
52.	Thermometer
53.	Modals and charts
54.	ECG Machine
55.	Microslides
57.	Double Demonstration Eye Piece
58.	Inductorium
59.	Short Circuiting Key
60.	Pohl's Commutator
61.	Vibrating Interrupter
62.	Muscle grip of Femur Clamp

## List of Equipment in Advance Physiology Lab

Sr No	Name of the item
1	Polygraphs(16 channel for Research)
2	Computerized Venous pressure apparatus
3	Spirometer,Computerized
4	Digital Mosso's Erograph
5	Thermo-asthesiometer computerized
6	Reactiontimer Apparatus
7	rTMS Machine
8	Multichannel digital physiograph,3 channels,complet
9	Student digital physiographs,(singlechannel)sen
10	AFT(Autonomic function tesing)
11	ECG machine 12 channel
12	Advanced NCV Machine
13	Vibration Analyser
14	Computerized assisted learning software for physiology dept(Theanimal experiments including the curriculum should be demonstrated through CAL.charts/photographs/model and videos
15	Flicker fusion apparatus
16	Steadiness tester
17	Smart board along with smart podium and camera(for lect hall)
18	Smart board ( for lect hall)
19	2TonAC
20	Student/patient chair
21	Special chair for RTMS
22	Doctor chair
23	Patient examination bed with foot rest

**\* Photographs of advance physiology lab**



**Advanced physiology lab**



**Advanced physiology lab**



**Advanced physiology lab**



**Advanced physiology lab**

## \*List of Departmental Library books

Sr.NO	Book No.	Title of books	Author
1	GMCJ/Physio lib/ 01	VIVA IN MEDICAL PHYSIOLOGY, 2ED	Basak
2	GMCJ/Physio lib/ 02	EASY EMG: A GUIDE TO PERFORMING NERVE CONDUCTION STUDIES AND ELECTROMYOGRAPHY 2ED	Weiss
3	GMCJ/Physio lib/ 03	EASY EMG: A GUIDE TO PERFORMING NERVE CONDUCTION STUDIES AND ELECTROMYOGRAPHY 2ED	Weiss
4	GMCJ/Physio lib/ 04	CARDIOVASCULAR PHYSIOLOGY 10ED	Pappano
5	GMCJ/Physio lib/ 05	CARDIOVASCULAR PHYSIOLOGY 10ED	Pappano
6	GMCJ/Physio lib/ 06	PRINCIPLES OF PHYSIOLOGY	Pramanik
7	GMCJ/Physio lib/ 07	PRINCIPLES OF PHYSIOLOGY	Pramanik
8	GMCJ/Physio lib/ 08	MANUAL OF PRACTICAL PHYSIOLOGY and MCQ books	Pramanik
9	GMCJ/Physio lib/ 09	A TEXTBOOK OF PRACTICAL PHYSIOLOGY, 8/ED	Ghai
10	GMCJ/Physio lib/ 10	A TEXTBOOK OF PRACTICAL PHYSIOLOGY, 8/ED	Ghai
11	GMCJ/Physio lib/ 11	BASICS OF MEDICAL PHYSIOLOGY 3ED	Venkatesh
12	GMCJ/Physio lib/ 12	BASICS OF MEDICAL PHYSIOLOGY 3ED	Venkatesh
13	GMCJ/Physio lib/ 13	PRACTICAL PHYSIOLOGY: A NEW APPROACH (PB)	khan
14	GMCJ/Physio lib/ 14	PRACTICAL PHYSIOLOGY: A NEW APPROACH (PB)	khan
15	GMCJ/Physio lib/ 15	GASTROINTESTINAL PHYSIOLOGY 8ED	Johnson
16	GMCJ/Physio lib/ 16	GASTROINTESTINAL PHYSIOLOGY 8ED	Johnson
17	GMCJ/Physio lib/ 17	ENDOCRINE AND REPRODUCTIVE PHYSIOLOGY,4ED	Porterfield
18	GMCJ/Physio lib/ 18	ENDOCRINE AND REPRODUCTIVE PHYSIOLOGY,4ED	Porterfield
19	GMCJ/Physio lib/ 19	PHYSIOLOGY PREP MANUAL FOR UNDERGRADUATES 5TH ED	Joshi
20	GMCJ/Physio lib/ 20	HUTCHINSON'S CLINICAL METHODS AN INTEGRATED APPROACH TO CLINICAL PRACTICE 1E,24TH ED	Glyn
21	GMCJ/Physio lib/ 21	HUTCHINSON'S CLINICAL METHODS AN INTEGRATED APPROACH TO CLINICAL PRACTICE 1E,24TH ED	Glyn
22	GMCJ/Physio lib/ 22	MEDICAL PHYSIOLOGY FOR UNDERGRADUATE STUDENTS	Khurana
23	GMCJ/Physio lib/ 23	LANGE GANONG'S REVIEW OF MEDICAL PHYSIOLOGY 25ED	Barrett
24	GMCJ/Physio lib/ 24	LANGE GANONG'S REVIEW OF MEDICAL PHYSIOLOGY 25ED	Barrett

25	GMCJ/Physio lib/ 25	MANUAL OF PRACTICAL PHYSIOLOGY FOR MBBS, 6ED	A. K. Jain
26	GMCJ/Physio lib/ 26	MANUAL OF PRACTICAL PHYSIOLOGY FOR MBBS, 6ED	A.K.Jain
27	GMCJ/Physio lib/ 27	EXERCISE PHYSIOLOGY - NUTRITION, ENERGY, AND HUMAN PERFORMANCE, 8ED	Mcardle
28	GMCJ/Physio lib/ 28	GUYTON & HALL TEXTBOOK OF MEDICAL PHYSIOLOGY - 2 SAE	Vaz
29	GMCJ/Physio lib/ 29	A TEXTBOOK OF BIOPHYSICS	R. N. Roy
30	GMCJ/Physio lib/ 30	A TEXTBOOK OF BIOPHYSICS	R. N. Roy
31	GMCJ/Physio lib/ 31	TEXTBOOK OF PHYSIOLOGY VOL 1,7ED	A. K. Jain
32	GMCJ/Physio lib/ 32	TEXTBOOK OF PHYSIOLOGY VOL 1,7ED	A. K. Jain
33	GMCJ/Physio lib/ 33	MEDICAL PHYSIOLOGY 3ED	Boron
34	GMCJ/Physio lib/ 34	MEDICAL PHYSIOLOGY 3ED	Boron
35	GMCJ/Physio lib/ 35	A TEXTBOOK OF MEDICAL PHYSIOLOGY 2ED	Venkatesh
36	GMCJ/Physio lib/ 36	A TEXTBOOK OF MEDICAL PHYSIOLOGY 2ED	Venkatesh
37	GMCJ/Physio lib/ 37	ESSENTIALS OF MEDICAL PHYSIOLOGY,7TH ED	Sembulingam
38	GMCJ/Physio lib/ 38	PRACTICAL PHYSIOLOGY BOOK	Chandrasekar
39	GMCJ/Physio lib/ 39	PRACTICAL PHYSIOLOGY BOOK	Chandrasekar
40	GMCJ/Physio lib/ 40	MANIPAL MANUAL OF MEDICAL PHYSIOLOGY	Shekar Chandra
41	GMCJ/Physio lib/ 41	MANIPAL MANUAL OF MEDICAL PHYSIOLOGY	Shekar Chandra
42	GMCJ/Physio lib/ 42	UNDERSTANDING MEDICAL PHYSIOLOGY,4/ED	Bijlani
43	GMCJ/Physio lib/ 43	UNDERSTANDING MEDICAL PHYSIOLOGY,4/ED	Bijlani
44	GMCJ/Physio lib/ 44	ESSENTIALS OF MEDICAL PHYSIOLOGY, 7ED	Sembulingam
45	GMCJ/Physio lib/ 45	BEST & TAYLOR'S PHYSIOLOGICAL PRACTICE FOR STUDENTS, 13/E, (EXCL.ABC)	Tandon
46	GMCJ/Physio lib/ 46	BEST & TAYLOR'S PHYSIOLOGICAL PRACTICE FOR STUDENTS, 13/E, (EXCL.ABC)	Tandon
47	GMCJ/Physio lib/ 47	PHYSIOLOGY PRACTICAL MANUAL FOR MBBS STUDENTS, 3E	Kapoor Raj
48	GMCJ/Physio lib/ 48	PHYSIOLOGY PRACTICAL MANUAL FOR MBBS STUDENTS, 3E	Kapoor Raj
49	GMCJ/Physio lib/ 49	MEDICAL PHYSIOLOGY 4 ED	Marya R.K.
50	GMCJ/Physio lib/ 50	SAMSON WRIGHT'S APPLIED PHYSIOLOGY 13/E/EXC (EXCL.ABC)	Keele
51	GMCJ/Physio lib/ 51	SAMSON WRIGHT'S APPLIED PHYSIOLOGY 13/E/EXC (EXCL.ABC)	Keele

52	GMCJ/Physio lib/ 52	HUMAN PHYSIOLOGY 11/E. VOL.1	Chatterjee
53	GMCJ/Physio lib/ 53	HUMAN PHYSIOLOGY 11/E. VOL.1	Chatterjee
54	GMCJ/Physio lib/ 54	HUMAN PHYSIOLOGY 11/E. VOL.2 (PB 2016)	Chatterjee
55	GMCJ/Physio lib/ 55	HUMAN PHYSIOLOGY 11/E. VOL.2 (PB 2016)	Chatterjee
56	GMCJ/Physio lib/ 56	LIPPINCOTT'S ILLUSTRATED REVIEWS PHYSIOLOGY	Preston
57	GMCJ/Physio lib/ 57	LIPPINCOTT'S ILLUSTRATED REVIEWS PHYSIOLOGY	Preston
58	GMCJ/Physio lib/ 58	PRINCIPLES OF MEDICAL PHYSIOLOGY 2ED.	Sircar
59	GMCJ/Physio lib/ 59	PRINCIPLES OF MEDICAL PHYSIOLOGY 2ED.	Sircar
60	GMCJ/Physio lib/ 60	POCKET COMPANION TO GUYTON AND HALL TEXTBOOK OF MEDICAL PHYSIOLOGY - 1ST SAE	Hall
61	GMCJ/Physio lib/ 61	POCKET COMPANION TO GUYTON AND HALL TEXTBOOK OF MEDICAL PHYSIOLOGY - 1ST SAE	Hall
62	GMCJ/Physio lib/ 62	TEXTBOOK OF PHYSIOLOGY 2 VOL ), 7ED	Jain
63	GMCJ/Physio lib/ 63	TEXTBOOK OF PHYSIOLOGY 2 VOL ), 7ED	Jain
64	GMCJ/Physio lib/ 64	MANUAL OF PRACTICAL PHYSIOLOGY FOR MBBS, 5ED	Jain
65	GMCJ/Physio lib/ 65	BERNE AND LEVY PHYSIOLOGY 1st SAE	Koeppen
66	GMCJ/Physio lib/ 66	BERNE AND LEVY PHYSIOLOGY 1st SAE	Koeppen
67	GMCJ/Physio lib/ 67	GUYTON & HALL TEXTBOOK OF MEDICAL PHYSIOLOGY - 2 SAE	Vaz
68	GMCJ/Physio lib/ 68	CLINICAL NEUROPHYSIOLOGY 3ED	Mishra
69	GMCJ/Physio lib/ 69	CLINICAL NEUROPHYSIOLOGY 3ED	Mishra
70	GMCJ/Physio lib/ 70	CONCISE MEDICAL PHYSIOLOGY	Chaudhuri
71	GMCJ/Physio lib/ 71	CONCISE MEDICAL PHYSIOLOGY	Chaudhuri
72	GMCJ/Physio lib/ 72	TEXT BOOK OF PRACTICAL PHYSIOLOGY, 4ED	Pal
73	GMCJ/Physio lib/ 73	TEXT BOOK OF PRACTICAL PHYSIOLOGY, 4ED	Pal
74	GMCJ/Physio lib/ 74	LPR FUNDAMENTALS OF MEDICAL PHYSIOLOGY, 6ED	Reddy
75	GMCJ/Physio lib/ 75	LPR FUNDAMENTALS OF MEDICAL PHYSIOLOGY, 6ED	Reddy
76	GMCJ/Physio lib/ 76	MEDICAL PHYSIOLOGY FOR UNDERGRADUATES STUDENTS	Khurana
77	GMCJ/Physio lib/ 77	TEXTBOOK OF MEDICAL PHYSIOLOGY	Khurana
78	GMCJ/Physio lib/ 78	TEXTBOOK OF MEDICAL PHYSIOLOGY	Khurana
79	GMCJ/Physio lib/ 79	COMPREHENSIVE TEXTBOOK OF MEDICAL PHYSIOLOGY 2ED VOL-I	G.K.PAL

<b>80</b>	GMCJ/Physio lib/ 80	COMPREHENSIVE TEXTBOOK OF MEDICAL PHYSIOLOGY 2ED VOL-II	G.K.PAL
<b>81</b>	GMCJ/Physio lib/ 81	COMPREHENSIVE TEXTBOOK OF MEDICAL PHYSIOLOGY 2ED VOL-I	G.K.PAL
<b>82</b>	GMCJ/Physio lib/ 82	COMPREHENSIVE TEXTBOOK OF MEDICAL PHYSIOLOGY 2ED VOL-II	G.K.PAL
<b>83</b>	GMCJ/Physio lib/ 83	TEXTBOOK OF PRACTICAL PHYSIOLOGY 5ED	G.K.PAL
<b>84</b>	GMCJ/Physio lib/ 84	TEXTBOOK OF PHYSIOLOGY 9ED VOL-I	A.K.JAIN
<b>85</b>	GMCJ/Physio lib/ 85	TEXTBOOK OF PHYSIOLOGY 9ED VOL-II	A.K.JAIN
<b>86</b>	GMCJ/Physio lib/ 86	TEXTBOOK OF PHYSIOLOGY 9ED VOL-I	A.K.JAIN
<b>87</b>	GMCJ/Physio lib/ 87	TEXTBOOK OF PHYSIOLOGY 9ED VOL-II	A.K.JAIN
<b>88</b>	GMCJ/Physio lib/ 88	QA PHYSIOLOGY	A.K.JAIN
<b>89</b>	GMCJ/Physio lib/ 89	MANUAL OF PRACTICAL PHYSIOLOGY 6ED	A.K.JAIN
<b>90</b>	GMCJ/Physio lib/ 90	MANUAL OF PRACTICAL PHYSIOLOGY 6ED	A.K.JAIN
<b>91</b>	GMCJ/Physio lib/ 91	TEXT AND PRACTICAL PHYSIOLOGY FOR MLT 2ED	A.K.JAIN
<b>92</b>	GMCJ/Physio lib/ 92	ESSENTIAL OF MEDICAL PHYSIOLOGY 8ED	SEMBULINGAM
<b>93</b>	GMCJ/Physio lib/ 93	TEXTBOOK OF PHYSIOLOGY	GUTTAL
<b>94</b>	GMCJ/Physio lib/ 94	FUNDAMENTALS OF MEDICAL PHYSIOLOGY 7ED VOL-I	L P REDDY
<b>95</b>	GMCJ/Physio lib/ 95	FUNDAMENTALS OF MEDICAL PHYSIOLOGY 7ED VOL-II	L P REDDY
<b>96</b>	GMCJ/Physio lib/ 96	COMPETENCY BASED PRACTICAL PHYSIOLOGY 4ED	L P REDDY