

Manual of Human Anatomy **Dissection**

succinctly describes the steps of dissection and identification of the dissected structures in a single volume. The photographs and illustrations of the dissected parts are based on the real dissection as performed in the dissection hall of a medical college. Diagrams of actual dissection create a photographic memory in the minds of the students and would also guide the 'budding doctors' later during their long clinical years in medicine and surgery.

Effort has been made to follow the latest Competency Based Undergraduate Curriculum for the Indian Medical Graduate to infuse all the practical skills in the students under the tenets of Competency Based Medical Education (CBME).

The manual gives *viva voce* questions at the end of every chapter and spots at the end of every section. These would prove useful to the students during their practical examination. The movements of various joints with their involved muscles and nerves are given in a tabulated form for ready reference to the reader.

This manual of dissection is complementary to *BD Chaurasia's Human Anatomy 8/e* (Vols 1-4) and other standard textbooks of anatomy, as together these will give a holistic idea of human anatomy to the medical students.

In addition to medical students, even students of dental, physiotherapy, and AYUSH streams will find it very useful. Depending upon the institutional facilities available, it will also serve the students of BSc and MSc in human anatomy as a guiding spirit in dissection.

Krishna Garg MBBS, MS, PhD, FIMSA, FIAMS, FAMS, FASI is ex-Professor and Head, Department of Anatomy, Lady Hardinge Medical College (LHMC), New Delhi. She joined LHMC in 1964 where she completed her MS and PhD, and taught anatomy till 1996. She has received fellowships of the Indian Medical Association, Academy of Medical Specialists, and the International Medical Science Academy. She was elected fellow of the Academy of Medical Sciences (FAMS) in 2005. She was honoured with Excellence Award in Anatomy in 2004 by Delhi Medical Association. She has received Life-Time Achievement Award, Fellowship of Anatomical Society of India, and DMA Distinguished Services Award, in 2015. She is visiting faculty of DNB, MDS and a PhD examiner.

She is author of *Companion Pocketbook: BD Chaurasia's Human Anatomy (Vols 1-3)* and *BDC Human Anatomy for Dental Students 3/e*; coauthor of *Textbook of Histology 5/e*, *Textbook of Neuroanatomy 6/e*, *Anatomy and Physiology for Nurses*, *Anatomy and Physiology for Allied Health Sciences*, *Anatomy and Physiology for Diploma in Pharmacy Students*, *Practical Anatomy Workbook*, *Practical Histology Workbook* and *Practical Anatomy Workbook for Dental Students*; and editor of *BD Chaurasia's Human Anatomy 8/e (Vols 1-4)*, *Human Embryology 2/e* and *Handbook of General Anatomy 6/e*.

Medha Joshi MBBS, FCGP is visiting faculty, Department of Anatomy, Pt Deendayal Upadhyaya National Institute of Persons with Physical Disabilities, New Delhi. She is an examiner of University of Delhi at IPH. She had taught anatomy to dental students at Krishna Dental College and Harsaran Das Dental College, Ghaziabad, and has now joined Kalka Dental College, Meerut. She is teaching general medicine and pathology at Amar Jyoti Institute of Physiotherapy. She has a keen interest in the subject of anatomy and her experience as a general physician of 25 years has provided her an insight in formulating the clinical correlation in anatomy. She is the coauthor of 7 books and workbooks of anatomy.

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Garg
Joshi



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Krishna Garg | Medha Joshi

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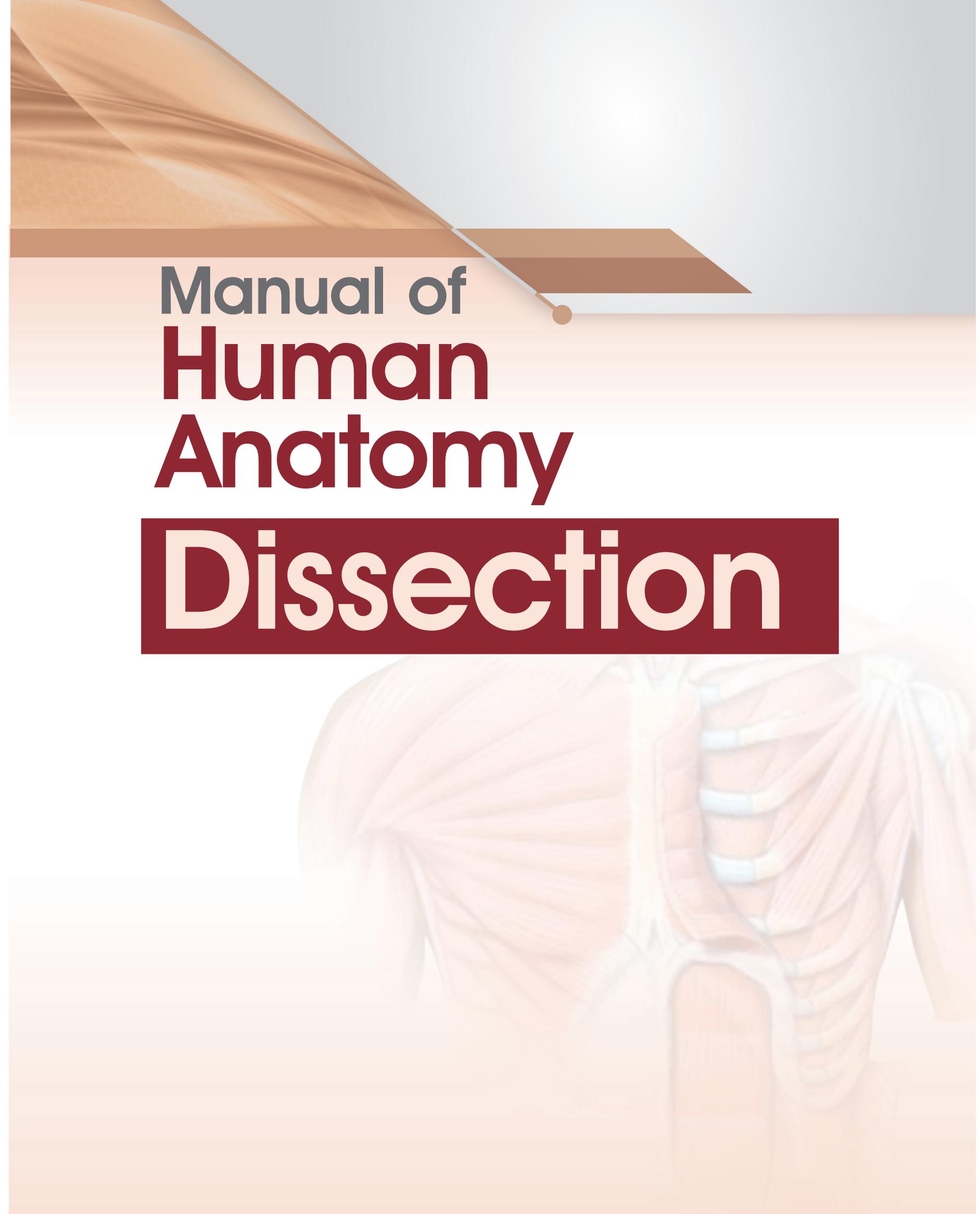
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4819/XI, Prahlad Street, 24 Ansari Road, Daryaganj, New Delhi 110 002, India
E-mail: delhi@cbspd.com, cbspubs@airtelmail.in; Website: www.cbspd.com
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Krishna Garg

MBBS MS PhD FIMSA FIAMS FAMS FASI

Legend of Anatomy Nation's Who's Who Member and Fellow, Academy of Medical Sciences
Fellow, Indian Academy of Medical Specialists Fellow, International Medical Science Academy
Fellow, Anatomical Society of India Lifetime Achievement Awardee DMA Distinguished Service Awardee

Ex-Professor and Head, Department of Anatomy
Lady Hardinge Medical College, New Delhi

Medha Joshi

MBBS, FCGP

Ex-Lecturer in Anatomy
Krishna Dental College and HD Dental College
Ghaziabad, Uttar Pradesh
Guest Faculty

Pt Deendayal Upadhyaya National Institute of Persons with Physical Disabilities, New Delhi
and Amar Jyoti Institute of Physiotherapy, Delhi



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4819/XI Prahlad Street, 24 Ansari Road, Daryaganj, New Delhi 110 002, India.

Ph: 011-23289259, 23266861, 23266867

Website: www.cbspd.com

Fax: 011-23243014

e-mail: delhi@cbspd.com; cbspubs@airtelmail.in.

Corporate Office: 204 FIE, Industrial Area, Patparganj, Delhi 110 092

Ph: 011-4934 4934

Fax: 011-4934 4935

e-mail: publishing@cbspd.com; publicity@cbspd.com

Branches

- **Bengaluru:** Seema House 2975, 17th Cross, K.R. Road, Banasankari 2nd Stage, Bengaluru 560 070, Karnataka
Ph: +91-80-26771678/79 Fax: +91-80-26771680 e-mail: bangalore@cbspd.com
- **Chennai:** 7, Subbaraya Street, Shenoy Nagar, Chennai 600 030, Tamil Nadu
Ph: +91-44-26680620, 26681266 Fax: +91-44-42032115 e-mail: chennai@cbspd.com
- **Kochi:** 42/1325, 1326, Power House Road, Opp KSEB, Ernakulum, Kochi 682 018, Kerala, India
Ph: +91-484-4059061-65,67 Fax: +91-484-4059065 e-mail: kochi@cbspd.com
- **Kolkata:** 6/B, Ground Floor, Rameswar Shaw Road, Kolkata-700014 (West Bengal), India
Ph: +91-33-2289-1126, 2289-1127, 2289-1128 e-mail: kolkata@cbspd.com
- **Mumbai:** 83-C, Dr E Moses Road, Worli, Mumbai-400018, Maharashtra
Ph: +91-22-24902340/41 Fax: +91-22-24902342 e-mail: mumbai@cbspd.com

Representatives

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| • Hyderabad | 0-9885175004 | • Jharkhand | 0-9811541605 | • Nagpur | 0-9421945513 |
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Preface

*I learn anatomy not from books but from dissections,
not from the tenets of philosophers but from the fabric of nature.*

—William Harvey

Dissection is but one of the means of learning anatomy. Dissection of an animal is the learning of zoology while dissection of a human cadaver is the learning of anatomy.

Dissection is a time-tested means of learning anatomy for centuries despite the technological advances. Dissection is a very specialised scientific procedure and is different from an “autopsy” or “postmortem”. During the anatomical dissection, the medical student, under the instructions of an experienced teacher, works slowly and steadily, identifying various structures. As of now, it takes almost one year during the preclinical course to dissect the whole body and there is a definite procedure to perform the dissection of any region. For this we have some Indian books which give steps of dissection with the hand-drawn/computer-drawn diagrams taken from textbooks of anatomy and are not the actual dissection photographs/diagrams; defeating the whole exercise of dissection. A few foreign atlases are available with beautiful dissection photographs but these look “too good to be true” for our milieu.

Mr SK Jain, Chairman and Managing Director, CBS Publishers & Distributors, proposed a “Dissector of anatomy”. After many deliberations, considering the real requirements of MBBS students, we decided to give the entire dissection in one volume only. The highlight of the volume would be to provide “actual ordinary dissection photographs” as seen in the dissection halls of a medical college.

There have been a multitude of hurdles in obtaining the “actual dissected specimens” from various sources. We could have taken specimens from any good museum, but these would be “too real for actual ordinary dissection specimen” as museum specimens are the artwork of senior teachers and technicians.

The first group of teachers to help us in this difficult and tough endeavour was the Principal, Rama Medical College, Kanpur. Later, assistance came from Bakson Homeopathic Medical College and Hospital, Greater Noida, UP. We have emphasised on the *dissection* photographs, not on illustrations giving only *theoretical* knowledge.

Actual dissection specimens were also available from DDU National Institute for Persons with Physical Disabilities, New Delhi, where we performed the dissection ourselves and took requisite photographs. Some photographs were also taken from Subharti Medical College, Meerut.

Towards the end of three years’ ongoing struggle AIIMS-Raipur pitched in, giving us the remaining photographs as the work on the Manual got completed. Despite all these efforts, a few diagrams are still hand- or computer-drawn, which we will like to replace in the future editions.

The aim of this dissector is to reach, locate and identify the structures in a particular region. Their full description is beyond the scope of this book and has to be learnt from a standard textbook of anatomy, e.g. BD Chaurasia’s *Human Anatomy*, 8 edn, Vols 1–4. It has been done deliberately to limit the size of the book, avoiding repetition of theoretical text material. Thus this Manual on dissection is a supplement to the textbook of anatomy. It should be able to provide holistic, useful, photographic memory for students long happy clinical years.

Steps of dissection are given in a simplified way with as many “ordinary dissection photographs” as possible to make the whole exercise easy and interesting. It will make many senior students or doctors nostalgic about their days in the dissection hall.

In the majority of medical colleges there is a shortage of cadavers and scarcity of time. In most of the medical institutions there are 20–30 students for one region being dissected and the time allocated to study of anatomy is hardly one year.

In this dissector the text of dissection is divided into Introduction and six sections, i.e. •Upper Limb, •Thorax, •Lower Limb, •Abdomen and Pelvis, •Head and Neck, and •Brain.

The chapter on introduction relates to getting the cadaver, embalming procedure, maintaining and caring for the cadaver and finally disposing its parts. It also includes various instruments for dissection.

Every section is divided into various chapters. Each chapter starts with “learning objectives” and “overview”, providing the bird’s eyeview of the particular topic. These are followed by “steps of dissection” and actual photographs of the concerned area. Emphasis has been given on the structures visible only. The chapter ends with a few *viva voce* examination questions to help in relearning the topic. This procedure is followed in all the chapters of a section. At the end of each section 10–15 *spots* are given. These are important from “examination point of view”. This is the simple procedure followed in the present book.

Only authentic way to learn anatomy is to draw, draw and draw coloured diagrams and marking structures on your body.

We would be highly obliged if our worthy teachers of anatomy send us the dissected photographs of any region of the body. These can be added later in the future printings of the Manual to improve its quality and would be thankfully acknowledged.

We are reminded of the quotation:

*If I hear, I forget
If I see, I remember
and
If I do, I understand*

Wishing you happy understanding and learning of anatomy

**Krishna Garg
Medha Joshi**



Acknowledgements

Idea is the main and most important component of any project. The idea for the present book, i.e. dissection manual, was provided by none other than Mr SK Jain, Chairman and Managing Director, CBS Publishers & Distributors. It was his brain-child given to us about four years back. For the idea to sink in deep, develop methodology and implementing it in right earnest has taken this much time.

The text writing was done in one volume only. The problematic part was to procure “actual ordinary dissection photographs”. First help for this was provided by Prof RK Srivastava, the then Principal, Rama Medical College, Kanpur, and two of his colleagues, Prof Shirin Jahan and Mr Kiran Kumar P. Over a period of time some photographs were provided by Dr Rashmi Bhardwaj of Mahaveer Tirthankar Medical College; Prof Satyam Khare and Prof Shilpi Jain of Subharti Medical College; and Prof Sushant Rit and Dr Yash Mehra of Bakson Homeopathic College, Greater Noida. Lastly, to cap it all tremendous assistance poured in from Dr Manisha Sinha and Prof DK Sharma, Department of Anatomy, under the guidance of Prof Nitin Nagarkar, Director, AIIMS-Raipur. We would like to thank Dr Puneet Kaur for her valuable inputs from time to time. A special thank you to Dr Amritpal Singh, for his beautiful sketch. Thanks to Dr Gayatri Rath, Dr PS Mittal and Dr Mrudula Chandrupatla for their kind help. We are grateful to Rekha Garg for her technical guidance.

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We are highly obliged to the Almighty and each and everyone who gave us timely helping hand during this difficult and tough endeavour. We hope and pray for continuous guidance and support from all members of anatomy fraternity.

Thanking everyone once again.

Krishna Garg
Medha Joshi





Contents

<i>Preface</i>	v
Introduction	1
<u>Section I: Upper Limb</u>	
1. Pectoral Region	9
2. Axilla	15
3. Back	22
4. Scapular Region	26
5. Cutaneous Nerves, Superficial Veins and Lymphatic Drainage	31
6. Arm	35
7. Forearm and Hand	43
8. Bones and Joints of Upper Limb	62
Spots on Upper Limb	79
<u>Section II: Thorax</u>	
9. Walls of Thorax	83
10. Thoracic Cavity, Pleurae and Lungs	87
11. Mediastinum	94
12. Pericardium and Heart	97
13. Superior Vena Cava, Aorta and Pulmonary Trunk	114
14. Trachea, Oesophagus and Thoracic Duct	118
15. Bones and Joints of Thorax	121
Spots on Thorax	127
<u>Section III: Lower Limb</u>	
16. Front of Thigh	131
17. Medial Compartment of Thigh	137
18. Gluteal Region	139
19. Popliteal Fossa	145
20. Back of Thigh	149
21. Front of Leg with Dorsum of Foot and Lateral Compartment of Leg	153
22. Back of Leg	163
23. Sole of Foot	169
24. Veins of Lower Limb	177
25. Bones and Joints of Lower Limb	180
Spots on Lower Limb	197

Section IV: Abdomen and Pelvis

26. Anterior Abdominal Wall	201
27. Male External Genital Organs	211
28. Abdominal Cavity and Peritoneum	217
29. Abdominal Part of Oesophagus and Stomach	226
30. Small and Large Intestines	232
31. Large Blood Vessels of the Gut	239
32. Extrahepatic Biliary Apparatus	245
33. Spleen, Pancreas and Liver	248
34. Kidney	255
35. Suprarenal Gland	260
36. Diaphragm	262
37. Posterior Abdominal Wall	264
38. Perineum	268
39. Boundaries and Contents of Pelvis	273
40. Urinary Bladder and Urethra	276
41. Female Reproductive Organs	279
42. Male Internal Genital Organs	284
43. Rectum and Anal Canal	286
44. Walls of Pelvis	289
45. Bones and Joints of Abdomen and Pelvis	292
Spots on Abdomen and Pelvis	297

Section V: Head and Neck

46. Scalp, Temple and Face	303
47. Side of the Neck and Posterior Triangle	312
48. Anterior Triangle of Neck	317
49. Parotid Region	325
50. Temporal and Infratemporal Fossae	329
51. Suprahyoid Muscles and Submandibular Gland	336
52. Structures in the Neck	340
53. Prevertebral and Paravertebral Regions	349
54. Muscles of the Back	354
55. Vertebral Canal	358
56. Cranial Cavity	361
57. Orbit	368
58. Mouth and Pharynx	372
59. Nose and Paranasal Sinuses	379
60. Larynx	385
61. Tongue	390
62. Ear	394
63. Eyeball	398
64. Bones and Joints of Head and Neck	401
Spots on Head and Neck	407

Section VI: Brain

65. Meninges	413
66. Spinal Cord	418
67. Brainstem	422
68. Cerebellum	427
69. Fourth Ventricle	430
70. Cerebrum	433
71. Diencephalon, Basal Ganglia and White Matter	441
72. Third Ventricle and Lateral Ventricle	447
73. Blood Supply of Spinal Cord and Brain	452
74. Cranial Nerves	457
Spots on Brain	467
<i>Index</i>	469

The Speaking Cadaver

I am nameless

I am casteless

I have no religion

You do not know who are my friends

Nor do you know my foes

But of one thing be rest assured

I will be your anatomy teacher

Serve you through thick and thin

Take care of me, learn from me

And I shall be your life-long guide

Uphold My Honour and I Shall Uphold Yours