Contents

Preface ... vii
Acknowledgement ... ix

SECTION 1: Basic Concepts of Medical Science

1. The Concept of Diagnostic Error ... 3
2. Neuronal Activity ... 5
3. Hunger ... 7
4. Thirst ... 9
5. Pain ... 12
6. Fever ... 20
7. Blood-Brain Barrier ... 22
8. Exercise ... 24
9. Language and Communication ... 26
10. Developmental Learning Disorders ... 28
11. Attention Deficit Hyperactivity Disorder ... 31
12. Minimal Brain Dysfunction ... 33
13. Hypothalamus ... 37

SECTION 2: Clinics in Medical Science

1. Gait ... 43
2. Ataxia-telangiectasia ... 50
3. Hydrocephalus ... 52
4. Hypotonia ... 58
5. Speech Impairment ... 66
6. Children with Communication Disorder ... 74
7. Seizure Disorder ... 82
8. Stroke in Adults ... 84
9. Status Epileptics ... 86
10. Abusive Head Trauma in Children ... 87
11. Delirium ... 88
12. Febrile Seizures ... 90
13. Syncope ... 93
14. Breath Holding Spells ... 97

SECTION 3: Musculo-Skeletal Disorders

1. Clinical Examination of Neuro-Musculo-Skeletal System 101
2. Neonatal Neuro-Musculo-Skeletal Disorders 104
3. Clinical Examination of Children and Adolescents with Neuro-Musculo-Skeletal Disorders 107
4. Hereditary Neuro-Musculo-Skeletal Disorders 111
5. Congenital Neuro-Musculo-Skeletal Disorders 120
6. Infectious Neuro-Musculo-Skeletal Disorders 126
7. Orthopedic Anesthesia in Neuro-Musculo-Skeletal Disorders 129
8. Neuro-Musculo-Skeletal Trauma 132
9. Neuro-Musculo-Skeletal Disorders in Physically Abused Children 139
10. Spondylolysis 148
11. Limping Gait in Children and Adolescents 149
12. Developmental Neuro-Musculo-Skeletal Disorders 153
13. Sport Injuries Causing Neuro-Musculo-Skeletal Disorders 158
14. Neuro-Musculo-Skeletal Disorders with Back-Pain 173
15. Scoliosis 175
16. Kyphosis 182
17. Neuro-Musculo-Skeletal Tumors 184
18. Axial Spondyloarthritis 189

SECTION 4: Neurological Deficits in Genetic Diseases

1. Neurological Deficits in Genetic Diseases 193
2. Role of Oligonucleotides in Genetic Diseases 194
3. Hypercholesterolemia, Hyperlipidemia, and Hypertriglyceridemia 197
4. CRISPR-Cas9 Mediated Gene Editing 199
5. Gene Therapy 200

SECTION 5: Gastrointestinal Diseases

1. Feeding Problem in Children 207
2. Eating Disorders 215
3. Gut-Brain Axis 216
4. Vomiting in Infants 218
5. Refractory Gastro-Esophageal Reflux Disease 220

6. Eosinophilic Esophagitis 225
7. Persistent Diarrhoea 228
8. Hepatitis C Disease 230
9. Non-Alcoholic Fatty Liver Disease 233
10. Hirschprung Disease 236
11. Gastroparesis 238
12. Irritable Bowel Syndrome 242
13. Hepato-Cellular Carcinoma 246
14. Acid Peptic Disease 250
15. Celiac Disease 254
16. Carcinoma Gall Bladder 257
17. Colo-Rectal Carcinoma 258
18. Signet Ring Cell Carcinoma 260
19. Pancreatic Neoplasms 261
20. Salivary Gland Neoplasms 263
21. Aphthous Stomatitis 264
22. Oro-Facial Growth and Development 265
23. Dental Caries 270
24. Acute Appendicitis 273
25. Lactose Intolerance 274
26. Chronic Pancreatitis 275
27. Pancreatic Cysts 279
28. Hepatic Sinusoids 282
29. Steatohepatitis 284
30. Wilson Disease 286