Contents

1. Scalp **1**

Dangerous Layer of the Scalp 1 • Blood Supply 2

2. Face **4**

Face 4 • Blood Supply of Face 5 • Nerve Supply of the Face 6 • Facial Nerve 7

3. Orbit **11**

Eyelids 11 • Conjunctiva 11 • Lacrimal Apparatus 11 • Bony Orbit 12 • Boundaries of the Orbit 12 • Contents of Orbit 13 • Muscles of Orbit 13 • Facial Sheath of Eyeball (Bulbar Fascia) 14 • Oculomotor Nerve 15 • Ciliary Ganglion 15 • Vessels of the Orbit 16

4. Temporal and Infratemporal Region **19**

Trigeminal Nerve 19 • Trigeminal Ganglion 19 • Ophthalmic Nerve 19 • Maxillary Nerve 20 • Mandibular Nerve 21 • Applied Anatomy 21 • Submandibular Ganglion 21 • Otic Ganglion 22 • Maxillary Artery/Internal Maxillary Artery 24

5. Temporomandibular Joint and Muscles of Mastication **26**

Temporomandibular Joint (TMJ) 26 • Ligament 26 • Clinical and Applied Anatomy 27 • Accessory Muscle of Mastication—Buccinator 28

6. Parotid Region **30**

Salivary Glands 30 • Parotid Gland 30 • Anatomical Features 31

7. Submandibular Region **34**

Submandibular Salivary Gland 34 • Sublingual Salivary Gland 36 • Suprahyoid Muscles 36 • Hyoglossus Muscle 36

8. Side of the Neck **39**

Anatomical Features of Neck 39 • Deep Cervical Fascia (Fascia Colli) 39 • Posterior Triangle 41 • Sternocleidomastoid Muscle (Sternomastoid) 43

9. Back of the Neck **45**

Ligamentum Nuchae 45 • Muscles of Back 45 • Suboccipital Triangle 46 • Suboccipital Muscles 47

10. Front of the Neck **48**

Anterior Triangle 48 • Common Carotid Artery 50 • Branches of Common Carotid Artery 51 • External Carotid Artery 52 • Internal Carotid Artery 52 • Internal Jugular Vein 54 • External Jugular Vein 55 • Ansa Cervicalis 56

11. Deep Structures in the Neck **58**
Contents 58 • Subclavian Artery 58 • Subclavian Vein 61 • Nerves of the Neck 62 • Cervical Plexus 64 • Cervical Pleura 66 • Styloid Apparatus 66

12. Cervical Viscera and Glands of the Neck **69**
Thyroid Gland 69 • Parathyroid Glands 72 • Trachea 72 • Esophagus 73

13. Prevertebral And Paravertebral Region **75**
Prevertebral Muscles 75 • Paravertebral Muscles 75

14. Lymphoid Tissue of Head and Neck **78**
Lymph Nodes of Head and Neck 78 • Deep Cervical Lymph Nodes 78 • Superficial Cervical Lymph Nodes 79 • Waldeyer's Lymphatic Ring 79 • Thymus 81

15. Joints of Head and Neck **83**
Atlanto–Occipital Joints 83 • Atlantoaxial Joints 83

16. Oral Cavity **85**
Oral Cavity 85 • Lips and Cheeks 85 • Sulcus 86 • Hard Palate 88 • Soft Palate 88

17. Tongue **91**
Functions of Tongue 91 • Dorsal Surface of Tongue 91 • Ventral/Inferior Surface of Tongue 92 • Muscles of Tongue 92 • Nerve Supply 94 • Arterial Supply 94

18. Nose and Paranasal Sinuses **96**
Nose 96 • Paranasal Sinuses 99

19. Pharynx **103**
Definition 103 • Subdivisions/Parts of Pharynx 103 • Structure of Pharynx 105 • Constrictor Muscles of Pharynx 105 • Longitudinal Muscles of Pharynx 106 • Deglutition/Swallowing 107 • Auditory Tube/Eustachian Tube 108

20. Larynx **110**
Situation and Extent 110 • Constitution of Larynx 110 • Skeleton or Cartilages of Larynx 110 • Ligaments and Membrane of Larynx 111 • Cavity of the Larynx 111 • Epithelial Lining of Larynx 111 • Intrinsic Muscles of the Larynx 111

21. Ear **113**
External Ear 113 • Middle Ear 115 • Internal Ear 116

22. Cranial Cavity **118**
Dura Mater 118 • Hypophysis Cerebri/Pituitary Gland 122 • Cerebrospinal Fluid 123

23. Ventricular System **126**
Lateral Ventricles 126 • Parts of Lateral Ventricles With Boundaries 126 • Fourth Ventricle 126

24. Brainstem **129**

Medulla Oblongata 129 • Pons/Metencephalon 130 • Mid Brain 131

25. Cerebellum **134**

Anatomical Features 134 • Surfaces 134 • Lobes 134 • Parts of Cerebellum 134 • Morphological and Functional Divisions of Cerebellum 134 • Connections of Cerebellum 135 • Gray Matter of Cerebellum 135 • Functions 135 • Clinical Anatomy 135

26. Cerebrum **136**

Cerebral Hemisphere 136 • Frontal Lobe 136 • Parietal Lobe 137 • Temporal Lobe 137 • Occipital Lobe 137 • Medial Surface of Cerebral Hemisphere 138 • Inferior Surface of Cerebral Hemisphere 138 • Functional Areas of Cerebral Cortex 139 • Internal Capsule 140 • Corpus Callosum 140 • Blood Supply of Brain 142 • Circle of Willis 142 • Venous Drainage of Brain 142 • Clinical Significance of Circle of Willis 143

27. Diencephalons **145**

Parts 145 • Thalamus 145 • Epithalamus 145 • Metathalamus 146 • Subthalamus 146 • Hypothalamus 146 • Basal Ganglia 147

28. Mandible **148**

Anatomical Features 148

29. Embryology **150**

Development of Face 150 • Branchial Apparatus/Pharyngeal Arches 152 • Development of Palate 154 • Development of Mouth 155 • Development of Tongue 155 • Development of Thyroid Gland 156 • Development of Pituitary Gland 157 • Development of Tonsils 157 • Development of Tooth 157

30. Histology **160**

Definition 160 • Classification 160 • Connective Tissue 161 • Histological Features 161

31. Miscellaneous **168**

Foramen 168 • Red Nucleus 168 • Spinal Cord 169 • Spinothalamic Sensory Pathway 169 • Various Types of Neurons 170 • Optic Pathway 171 • Brachial Plexus 171 • Joints 173 • Arm Muscles 174 • Femoral Triangle 174 • Blood Supply of Bone 174 • Blood Supply of Heart 174 • Syndromes 175 • Broncho-pulmonary Segments 176 • Lmphatic Drainage of Breast 176

Bibliography **178**

Index **179**