QUESTIONS FOR THE EXAM -
PROFILE SECTION (for the Faculty of Dentistry).

Oral cavity and its structures.

Oral cavity. Oral mucosa structure and functions. Structural and histophysiological features of mucosal epithelium. Areas of the oral mucosa with different degrees of keratinization (keratosis) of the epithelium. Orthokeratosis. Parakeratosis. Regeneration of the epithelium. The lamina propria mucosae, its composition. Morphological and functional compartments of the oral mucosa (masticatory mucosa, lining mucosa, specialized mucosa): localization and comparative microanatomy. Submucosa: structure and function.

Gum. Its structure and histochemical characteristics. Stratified nonkeratinized epithelium and lamina propria of the gingival mucosa. Free and attached gingiva. Interdental papillae of the gums. Free gingival groove. Hard palate. Structural features of the glandular and the fatty zones of the hard palate. Marginal zone and palatine raphe zone. Lining mucosa.

Lips. Characteristics of the cutaneous, intermediate and mucosal parts (zones) of the lip. Glands of the lip.

Cheeks. Structure of the skin surface and the mucous surface of the cheek. Zones of the buccal mucosa. Glands of the cheek. Buccal fat pad. Mucosa of the alveolar processes of the jaws. Soft palate Comparative microanatomy of the oral and the nasal surfaces of the soft palate. Floor of the mouth.

Tongue: structure and embryonic development. Mucosa of the tongue, structural features of the ventral, dorsal, lateral surfaces and the root of the tongue. Papillae of the tongue. Structure and location of filiform, fungiform, vallate and foliate lingual papillae. Taste buds. Glands of the tongue. The muscular body of the tongue.

Specialized lymphoid formations of the oral cavity.
Lymphoepithelial pharyngeal ring. Tonsils. Lingual, palatine, pharyngeal and other tonsils. Their localization, structural features and development. Tonsillar crypts. Lymphatic follicles of the tonsils and their cellular elements. Capsule and lobules of tonsils. Histophysiology of the lymphoepithelial pharyngeal ring. Age-related changes in the tonsils.

Glands of the oral cavity. Salivary glands. Small salivary glands, its features and distribution. Large salivary glands, its structure, development and histophysiology. Microscopic and ultramicroscopic structure of the secretory portions and excretory ducts. Structural features of protein, mucosal and mixed secretory portions. Striated salivary ducts and their significance in the processes of secretion and reabsorption. Saliva, its chemical composition and significance. Development and structural features of the parotid, submandibular and sublingual salivary glands. Endocrine function of the salivary glands. Age-related changes and regeneration of glands.

Teeth. General morphofunctional characteristics of teeth. Hard and soft tissues of the tooth.

Enamel. Its development, microscopic and ultramicroscopic structure, physicochemical properties. The shape and structure of enamel rods. Radial light and dark enamel stripes and tangential lines. Enamel plates, tufts, spindles. The major stages of amelogenesis. Features of calcification and metabolism in enamel. Features of the structure of the enamel of various teeth. Dentinoenamel and cementoenamel junctions. Cuticle, pellicle and their role in the penetration of inorganic substances into enamel. Epithelial Hertwig sheaths, the sources of their development and the role in the formation of the tooth root and in the development of

pathological processes. Islets of Malasse, the sources of their development and the role in the development of pathological processes.

Dentin, its microscopic and ultramicroscopic characteristics. The dentin matrix, fibers (radial and tangential), dentinal tubules, calcification of dentine. Interglobular dentin. Granular layer. Peritubular and intertubular dentin. Mantle and peripulpal dentin. Contour lines of dentin. Predentin, Primary and secondary dentin. ransparent dentin, dentin's reaction to damage.

Cement. Its location, chemical composition, calcification. The structure of cement. Cellular and cell-free cement. Cementocytes, Intercellular substance, its ground substance and fibers. The connection of cement with periodontium. Cement nutrition.

Soft tooth tissues. Features of the structure and morphofunctional value of the tooth pulp. The intercellular substance of the pulp, its histochemical characteristics. Pulp cells. Features of the pulp layers. Odontoblasts, their structure and role. Crown pulp and root pulp. The value of pulp in the vital activity of the tooth. Dentikli and petrifications.

The supporting apparatus of the teeth.
Periodontal ligament: cells and collagen fibers. Features of the location of fibers in different parts of the periodontium. Circular ligament. Epithelial islets in the periodontium.

Dental alveolus, structure and functional characteristics. Structural features and location of the interalveolar and inter-root septum. Reconstruction of the periodontal ligament, dental alveoli and alveolar parts of the upper and lower jaw in response to changes in functional load. Dentoalveolar connection.

Gum (Gingiva). Gingival gap and gingival pouch and their role in pathology. Epithelial attachment.

Parodontium as a complex of support-retaining tissues of the tooth: cementum, periodontium, alveolar bone, gum. Its age-related changes and functional restructuring.

Development of the face, mouth and jaws. Oral fossa. Primary oral cavity. Pharyngeal apparatus. Its parts and derivatives. Pharyngeal pouches, clefts and arches. Development of the face, development of the palate, and division of the primary oral cavity into the final oral and nasal cavities. Development of the vestibule of the oral cavity. Development of the jaw apparatus. Tongue development. Malformations (cleft lip, palate, face, developmental disorders of the tongue, congenital fistulas, cysts, etc.).

Development of the dental system. Development and growth of milk teeth. Formation of vestibular and primary dental plates. Tooth germ morphogenesis. Tooth germ differentiation. Enamel organ, dental papilla, dental sac. Their structure, development and derivatives. Violations of the early stages of tooth development. Histogenesis of the tooth.
Odontoblasts and their role in the formation of dentin in the crown and root of the tooth. Formation of radial and tangential dentin fibers, mantle and peripulpal dentin. Predentin. Enameloblasts, change in their polarity. Enamelogenesis. Formation of enamel prisms. Enamel calcification. Enamel maturation. Enamelogenesis disorders. Development of the root of the tooth.
Cementoblasts and their role in the formation of cementum. Formation of cellular and acellular cementum. Differentiation of dental papillae. Development of the dental pulp.
Development of periodontal ligament and bone alveoli. Teething theories. Teething disorders. Development and teething of permanent teeth. Physiological and reparative regeneration of tooth tissues. Age-related changes in teeth. Features of the development of multi-rooted teeth.