

**SUPPLEMENTARY BDS I PROFESSIONAL EXAMINATION
2009-10**

Subject Code: BDS101

Paper ID: 0311101

General Human Anatomy

Time: 3 Hours

Max Marks: 70

**Note: 1. Attempt all questions from Part A and Part B. Each Part Carry 35 Marks. Draw proper diagrams to support your answer.
2. Use separate answer book for Part A and Part B.**

Part 'A'

1. Describe the Parotid gland under the following heading: (8)
 - a) Gross features
 - b) Relations
 - c) Vascular and Nerve supply
 - d) Applied anatomy
2. Describe the anatomy of the tongue and correlates its development with nerve supply. (8)
3. Write short notes on (3x3=9)
 - a) Palatine Tonsil
 - b) Sensory nerve supply of the face
 - c) Pharyngeal arches
4. Choose the correct answer for each question. (2x5=10)
 - a) Name the largest paranasal sinus present in the body:-
 - i) Frontal sinus ii) Maxillary sinus
 - iii) Sphenoidal sinus iv) Ethmoidal sinus
 - b) Name the muscle responsible for smiling:-
 - i) Platysma ii) Zygomaticus major
 - iii) Buccinator iv) Zygomaticus minor
 - c) At what age anterior fontanelle, which is present in foetal skull as membranous gap ossifies:-
 - i) 2 years ii) 8 months
 - iii) 16 months iv) 18 months

- d) How many bones are present in the skull:
 - i) 14 ii) 28
 - iii) 22 iv) 32
- e) All of the following muscles are grouped together as 'muscles of mastication' except:-
 - i) Buccinator ii) Masseter
 - ii) Temporalis iv) Pterygoids

Part 'B'

1. Describe the course, branches, distribution and applied anatomy of the facial nerve. (8)
2. Describe the cerebellum in detail. (8)
3. Write short notes on: (3x3=9)
 - a) Corpus Callosum
 - b) CSF Circulation
 - c) Development of Tooth
4. Choose the correct answer for each question. (2x5=10)
 - a) Stenson's duct drains:-
 - i) The parotid salivary gland
 - ii) The submandibular salivary gland
 - iii) The sublingual salivary gland
 - iv) The pancreas
 - b) Stylopharyngeus muscle is supplied by:-
 - i) Pharyngeal plexus
 - ii) Facial nerve
 - iii) Glossopharyngeal nerve
 - iv) Vagus nerve
 - c) Incomplete fusion of two medial nasal swellings results in the production of:-
 - i) Oblique facial cleft
 - ii) Median facial cleft of upper lip
 - iii) Lateral cleft of upper lip
 - iv) Macrostomia

- d) The superior meatus of the nose contains the opening of:-
- i) Anterior ethmoidal air cells
 - ii) Middle ethmoidal air cells
 - iii) Posterior ethmoidal air cells
 - iv) Frontal air cells
- e) The function of superior rectus muscle:-
- i) Intorsion, adduction
 - ii) Abduction, elevation
 - iii) Elevation
 - iv) Depression

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2. Use separate answer book for Part A and Part B.**

Part 'A'

1. Describe the Thyroid gland under the following headings: (8)
 - a) Gross features
 - b) Relations
 - c) Vascular and Nerve supply
 - d) Applied anatomy

2. Discuss the temporo-mandibular joint in detail. (8)

3. Write short notes on (3x3=9)
 - a) Styloid Process
 - b) Anatomy of Tooth.
 - c) Submandibular ganglion.

4. Choose the correct answer for each question. (2x5=10)
 - a) The parotid duct pierces which of the following muscles prior to entry into the oral cavity:-

i) Medial pterygoid	ii) Buccinator
iii) Mylohyoid	iv) Masseter
 - b) The incisive foramen is associated with which of the following nerve:-

i) Nasopalatine	ii) Mental
iii) Inferior alveolar	iv) Lesser petrosal nerve
 - c) Mandibular teeth are vascularized by branches of which of the following arteries:-

i) Labial	ii) Lingual
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- iii) Facial iv) Maxillary
- d) Anterior 2/3 of tongue arises from:
 - i) Hyoid arch
 - ii) Hypobranchial eminence
 - iii) Mandibular arch
 - iv) Styloid arch
- e) Main arterial supply of tonsil is from:-
 - i) Tonsillar branch of facial artery
 - ii) Tonsillar branch from internal maxillary artery
 - iii) Tonsillar branch from lingual artery
 - iv) Tonsillar branch from superior thyroid artery

Part 'B'

1. Describe the course, branches, distribution and applied anatomy of the trigeminal nerve. (8)
2. Describe the muscles of mastication. (8)
3. Write short notes on: (3x3=9)
 - a) Carotid sheath
 - b) External features and functional areas of cerebral cortex
 - c) Down's Syndrome.
4. Choose the correct answer for each question. (2x5=10)
 - a) Wharton's duct drains:-
 - i) The parotid salivary gland
 - ii) The submandibular salivary gland
 - iii) The sublingual salivary gland
 - iv) The pancreas
 - b) Damage to the facial nerve within the parotid gland may cause:-
 - i) Spasm of the muscles of mastication
 - ii) Drooping of the lips
 - iii) Deviation of the tongue to the affected side
 - iv) Partial anesthesia of the cheek on the affected side

- c) Which of the following nerve exits the cranium through the foramen ovale:-
 - i) Ophthalmic
 - ii) Maxillary
 - iii) Glossopharyngeal
 - iv) Mandibular
- d) The inferior meatus of the nose contains the opening of:-
 - i) Anterior ethmoidal air cells
 - ii) Nasolacrimal duct
 - iii) Maxillary air cells
 - iv) Frontal air cells
- e) The communicating vein responsible for spread infection from the dangerous area of the face:-
 - i) Superior ophthalmic Vein
 - ii) Inferior Ophthalmic Vein
 - iii) Maxillary Vein
 - iv) Lingual Vein

BDS I PROFESSIONAL EXAMINATION 2009-10

Subject Code: BDS102

Paper ID: 0311102

General Human Physiology and Biochemistry

Time: 3 Hours

Max Marks: 70

- Note: 1. Attempt all questions from Part A and Part B. Each Part Carry 35 Marks. Draw proper diagrams to support your answer.**
2. Use separate answer book for Part A and Part B.

Part 'A'

1. What are the compositions and functions of gastric juice? Discuss the mechanism of secretion and regulation of gastric juice. (5+3=8)
2. How Oxygen is transported in blood? Write about the factors which affect the shift of oxygen-Hb dissociation curve. (5+3=8)
3. Write short notes on (3x3=9)
 - a) Functions of saliva
 - b) Sequence of events in neuromuscular-transmission
 - c) Hemolytic disease of new born.
4. Choose the correct answer for each question. (2x5=10)
 - a) Clinically normal RBC count is:-
 - i) 5 million/cumm
 - ii) 6 million / cumm
 - iii) 12 million / cumm
 - iv) 10 Lakh /cumm
 - b) Maximum pressure achieved by left ventricle in a cardiac cycle (m.m Hg):-

i) 100	ii) 120
iii) 150	iv) 200
 - c) Aldosterone:-
 - i) Is formed in kidney
 - ii) Increases Na⁺ Excretion
 - iii) Increases K⁺ reabsorption

- iv) Is formed in adrenal gland
- d) Hormone responsible for milk ejection:
 - i) Oxytocin
 - ii) Estrogen
 - iii) Prolactin
 - iv) Relaxin
- e) The structure responsible for colour vision is:
 - i) Rods
 - ii) Cones
 - iii) Both
 - iv) None

Part 'B'

1. Discuss glycolysis and Krebs cycle. (8)
2. How are fatty acyl CoA derivatives transported to Mitochondria? Explain the reactions of β -oxidation of fatty acid. What is the yield of ATP from the complete oxidation of a molecule of palmitic acid? (8)
3. Write short notes on: (3x3=9)
 - a) Glycogen synthesis
 - b) Active Transport
 - c) Deficiency and toxic manifestation of fluoride
4. Choose the correct answer for each question. (2x5=10)
 - a) Diabetes mellitus is due to the defect in the action of:-
 - i) Insulin
 - ii) Glucagon
 - iii) Anti diuretic hormone
 - iv) Thyroid hormone
 - b) Maltose is a disaccharide comprising of:-
 - i) Glucose and Galactose
 - ii) Glucose and Glucose
 - iii) Glucose and Fructose
 - iv) Xylose and Ribose
 - c) 4- Epimer of D-Glucose is:
 - i) L-Glucose
 - ii) α -Glucose
 - iii) D-Galactose
 - iv) D-Mannose
 - d) Vitamin D mimics the action of :
 - i) Parathormone
 - ii) Calcitonin
 - iii) Glucagon
 - iv) Growth hormone
 - e) The disease pellagra is due to a deficiency of:-
 - i) Vitamin B₆
 - ii) Biotin
 - iii) Folic acid
 - iv) Niacin

**SUPPLEMENTARY BDS I PROFESSIONAL EXAMINATION
2009-10**

Subject Code: BDS102

Paper ID: 0311102

General Human Physiology and Biochemistry

Time: 3 Hours

Max Marks: 70

**Note: 1. Attempt all questions from Part A and Part B. Each Part Carry 35 Marks. Draw proper diagrams to support your answer.
2. Use separate answer book for Part A and Part B.**

Part 'A'

1. Define Blood Pressure. Give its normal value. Describe regulation of B.P. (1+1+6=8)
2. What are compositions and functions of gastric juice? Discuss the mechanism of secretion and regulation of gastric juice. (3+5=8)
3. Write short notes on (3x3=9)
 - a) List Functions of Hypothalamus
 - b) Hypoxia
 - c) Active transport
4. Choose the correct answer for each question. (2x5=10)
 - a) Affinity of haemoglobin for oxygen is influenced by following factors **except**:-
 - i) H⁺
 - ii) Temperature
 - iii) None
 - iv) 2,3 DPG
 - b) Atrophy of gastric mucosa produces:-
 - i) Hyperacidity
 - ii) Indigestion
 - iii) Gas formation
 - iv) Pernicious Anaemia
 - c) Dyspnoea is:-
 - i) Normal Breathing at rest
 - ii) Difficulty in breathing
 - iii) Stoppage of breathing
 - iv) Painful breathing
 - d) Which sensation is not transmitted by dorsal column:
 - i) Pain
 - ii) Fine touch

- iii) Pressure
- iv) Vibrations
- e) Diabetes Mellitus occurs due to:-
 - i) Insulin excess
 - ii) Insulin deficiency
 - iii) Thyroxine deficiency
 - iv) ADH deficiency

Part 'B'

1. Describe transcription in prokaryotes. Draw a diagram. (8)
2. Explain the factor affecting enzyme activity. (8)
3. Write short notes on: (3x3=9)
 - a) Dietary fibres
 - b) BMR
 - c) Glycolysis
4. Choose the correct answer for each question. (2x5=10)
 - a) Diabetes insipidus is due to the defect in the action of:-
 - i) Insulin
 - ii) Glucagon
 - iii) Anti diuretic hormone
 - iv) Thyroid hormone
 - b) The disease Beri Beri is due to deficiency of:-
 - i) Thiamine
 - ii) Riboflavin
 - iii) Niacin
 - iv) Pyridoxine
 - c) Hormone containing iodine is:
 - i) TSH
 - ii) Thyroid hormone
 - iii) Insulin
 - iv) Glucagon
 - d) The mitochondrial electron transport chain carriers are located:-
 - i) in the inner mitochondrial membrane
 - ii) in the mitochondrial matrix
 - iii) in the inter membrane space
 - iv) in the outer mitochondrial membrane
 - e) β - oxidation of fatty acids occurs in?
 - i) Lysosomes
 - ii) Peroxisomes
 - iii) Mitochondria
 - iv) Cytosol

BDS I PROFESSIONAL EXAMINATION 2009-10

Subject Code: BDS – 103

Paper ID: 0311103

Oral and Dental Anatomy & Histology

Time: 3 Hours

Max Marks: 70

- Note: 1. Attempt all questions from Part A & Part B. Each Part Carry 35 Marks. Draw proper diagrams to support your answer.**
2. Use separate answer book for Part A and Part B.

Part 'A'

1. Define eruption. Enumerate the theories of eruption and explain the most accepted theory in detail. (8)
2. Write the chronology and describe the morphology of occlusal surface of permanent maxillary 1st molar in detail. (8)
3. Write briefly on (3x3=9)
 - a) Leeway Space of Nance.
 - b) Principle fibres of periodontal ligament.
 - c) Functions of saliva.
4. Multiple choice questions: (2x5=10)
 - a) Lines of retzius is due to, except
 - i) Variation in organic structure
 - ii) Disturbances in rhythm of mineralization
 - iii) Intermittent alteration of rods course.
 - iv) These darker areas have very low organic content.
 - b) The portion of tooth that is exposed in the mouth is known as the
 - i) Natural crown
 - ii) Anatomical crown
 - iii) Clinical crown
 - iv) Exposed crown
 - c) The smallest cusp of the maxillary permanent first molar excluding cusp of carabelli, is the
 - i) Mesiolingual cusp
 - ii) Distolingual cusp

- iii) Meiobuccal cusp
 - iv) Distobuccal cusp
- d) Dentinal tubules contain
 - i) Nerve fiber terminal.
 - ii) Collagea fiber.
 - iii) Odontoblastic process
 - iv) All of the above
 - e) Weil's zone in pulp organ is
 - i) Cell free zone.
 - ii) Cell rich zone.
 - iii) neurovascular zone.
 - iv) Odontoblastic zone

Part 'B'

1. Define and classify Oral Mucous membrane? Write in detail about masticatory mucosa? (8)
2. Write in detail about the age changes of dentin. Add a note on dentinal hypersensitivity. (8)
3. Write briefly on (3x3=9)
 - a) Cellular cementum v/s Acellular cementum.
 - b) Enamel spindles
 - c) Papillae of the tongue
4. Write the correct answer of the following multiple choice questions- (2x5=10)
 - a) According to FDI numbering system the permanent mandibular left second premolar is
 - i) 2
 - ii) 17
 - iii) 35
 - iv) 18
 - b) The position of maximum inter cuspatation of upper and lower teeth is referred to as
 - i) Centric position
 - ii) Centric occlusion
 - iii) Centric relation
 - iv) Centric bite.
 - c) Which of the following ducts arise from secretory end pieces of salivary
 - i) Striated ducts
 - ii) Inter culated
 - iii) Excretory ducts
 - iv) Interlobular ducts

- d) Merkel cells are likely to be found in which of the following tissues
- | | |
|-----------------|---------------------|
| i) Periosteum | ii) Lamiva Propria. |
| iii) Epithelium | iv) Submucosa |
- e) Ossification of mandible starts in which of the following regions
- | | |
|---------------------|----------------------|
| i) Alveolar process | ii) Mental foramen |
| iii) Condyle | iv) Coronoid process |

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2009-10**

Subject Code: BDS – 103

Paper ID: 0311103

Oral and Dental Anatomy & Histology

Time: 3 Hours

Max Marks: 70

- Note: 1. Attempt all questions from Part A & Part B. Each Part Carry 35 Marks. Draw proper diagrams to support your answer.
2. Use separate answer book for Part A and Part B.**

Part 'A'

1. Define and classify oral mucosa. Write in detail about the different layers of keratinized stratified squamous epithelium. (8)
2. Classify salivary glands. Write in detail about the histology of parotid gland. (8)
3. Write briefly on (3x3=9)
 - a) Age changes of pulp.
 - b) Differences between deciduous and permanent teeth.
 - c) Late Bell Stage.
4. Multiple choice questions: (2x5=10)
 - a) During production of enamel which of the following parts of enamel organ disappears.
 - i) Inner enamel Epithelium.
 - ii) Outer enamel epithelium
 - iii) Reduced enamel epiphelium.
 - iv) Stellate Reticulum.
 - b) Which of the following Histologic features of enamel is apparently due to an optical phenomenon?

i) Enamel tufts	ii) Enamel spindles
iii) Cross striations	iv) Hunter schreger bands

- c) Which of the following is the last succedaneous tooth to erupt?
- Maxillary canine
 - Mandibular canine
 - Maxillary 1st premolar
 - Mandibular 2nd premolar
- d) The histology of enamel may be best observed using which of the following methods of slide preparation.
- H & E stain
 - PAS stain.
 - Ground section
 - Exfoliative cytology.
- e) The calcium ions present in saliva are most likely to play a role in which of the following function of saliva.
- Antibacterial
 - Buffering.
 - Protection.
 - Digestion.

- Fungiform
 - Circumvallate
 - Filliform
 - None of the above.
- c) Osteoclasts are rich in
- Acid phosphatase
 - Alkaline phosphatase
 - Peroxidase
 - Dehydrogenase
- d) The cementoblasts are derived from
- Enamel organ
 - Epithelial root sheath.
 - Dental papilla
 - Dental Sac
- e) Parasympathetic innervation to parotid glands is from which ganglion.
- Geniculate
 - Otic
 - Trigeminal
 - Gasserian

Part 'B'

- Write in detail about the hypocalcified structures of enamel. (8)
- Describe various stages of development of tooth. (8)
- Write briefly on (3x3=9)
 - Inter globular Dentin
 - Fixation
 - Ridges and fossae.
- Write the correct answer of the following multiple choice questions- (2x5=10)
 - Stratum Intermedium of non keratinized epithelium is synonymous to
 - Stratum Granulosum
 - Stratum Spinosum
 - Stratum Basale
 - Stratum Corneum
 - The tongue papilla which are least in number.