

**BDS – 1<sup>st</sup> YEAR EXAMINATIONS; JUNE 2018**  
**(SUB: ANATOMY; PAPER CODE: 0210101)**

**(Re - appear)**

**Time: 03:00 Hrs.**

**Max. Marks: 70**

**Instructions:-**

1. Write your Roll No. on the Question paper.
2. Candidate should ensure that they have been provided correct question paper. Complaints in this regard, if any, should be made within 15 minutes of the commencement of the exam. No complaint(s) will be entertained thereafter.
3. The Question paper consists of **Two Parts: Part-I and Part-II having 35 Max. Marks for each. Use separate answer books for Part-I and Part-II.** Any mistake in this regard, will be responsibility of the examinee and no complaint(s) will be entertained after the examinations.
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5. Illustrate your answer with diagram wherever required.

**PART-I**

- Q.1** Describe Muscles of mastication under the following headings **(4+3+2=9)**
- a) Attachments and nerve supply
  - b) Actions
  - c) Applied aspect
- Q.2** Explain anatomical/embryological basis of **ANY FOUR** of the following: **(4x5=20)**
- a) Referred pain to ear in tonsillitis
  - b) Black eye
  - c) Partial Loss of taste on extraction of third molar tooth
  - d) Frey syndrome
  - e) Thyroid swelling move with deglutination
- Q.3** Draw well labelled diagrams only of **ANY THREE** of the following: **(3x2=6)**
- a) Histology parotid gland
  - b) Anterior view of laryngeal cartilages
  - c) Typical synovial joint
  - d) Floor of fourth ventricle

**PART-II**

- Q.4** Describe tongue under the following headings: **(1+3+3+2=9)**
- a) Parts, borders and surfaces
  - b) Muscles and their actions
  - c) Special sensory nerve supply
  - d) Applied aspect
- Q.5** Describe briefly **ANY FOUR** of the following: **(4x5=20)**
- a) Extra ocular muscles
  - b) Corpus Luteum
  - c) Muscles and ligaments attached on styloid process of skull
  - d) Ansa cervicalis
  - e) Lymph node
- Q.6** Write short notes on **ANY THREE** of the following **(2x3=6)**
- a) External carotid artery
  - b) Typical spinal nerve
  - c) Pulmonary circulation
  - d) Mutation

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**PART - I (35 MARKS)**

**PART – A (DESCRIPTIVE TYPE QUESTIONS) (25 MARKS)**

- Q.1** Describe Tongue under the following: (10)
- a) Extrinsic muscles
  - b) Nerve Supply
  - c) Applied aspect
- Q.2** Write short notes on: (3x3=9)
- a) Fertilization
  - b) Speech centers of cerebral cortex
  - c) Trigeminal neuralgia
- Q.3** Write briefly on: (3x2=6)
- a) Parotid duct
  - b) Sternocleidomastiod muscle
  - c) Atlanto-axial joint

**PART – B (OBJECTIVE TYPE QUESTIONS OMR SHEET) (10 MARKS)**

**Select the most appropriate response:** (10x1=10)

- Q.1** All the following are true regarding sesamoid bone except:
- a) Develops in tendon
  - b) Develops where there is wear and tear of tendon
  - c) Develops in skull
  - d) Alters the direction of pull of the muscle
- Q.2** The most appropriate statement about temporomandibular joint is:
- a) The articular disc is fibrocartilagenous
  - b) The articular disc and the articular cartilages are hyaline
  - c) The articular disc and the articular cartilages are fibrocartilagenous
  - d) The articular disc is fibrocartilagenous but the articular cartilages are hyaline.
- Q.3** When right hypoglossal nerve is damaged, on protrusion of tongue:
- a) The tongue deviates to the right
  - b) The tongue deviate to the left
  - c) The tongue deviates upwards
  - d) The tongue deviates downwards

- Q.4** The most prominent cell in cerebellum is  
 a) Granuler cell            b) Goblet cell            c) Purjinke cell            d) Pyramidal
- Q.5** Posterior cerebral arteries branch from  
 a) Vertebral artery            b) Basilar artery  
 c) Internal carotid artery            d) External carotid artery
- Q.6** Dysdydocokinesia, hypotonia, dysarthria and drunken gate are features of  
 a) Cerebellar lesion            b) Cerebral injury  
 c) Alcohol addiction            d) Schizophrenia
- Q.7** The cranial nerve with longest intracranial course is:  
 a) Occulomotor            b) Trochlear            c) Optic            d) Abducent
- Q.8** All of the following are the sites for intramuscular injections **Except**:  
 a) Deltoid            b) Outer thigh  
 c) Upper outer gluteal region            d) Nineth intercostal space
- Q.9** All of the following are sites of ectopic pregnancy **Except**:  
 a) Upper uterus            b) Fallopian tube  
 c) Broad ligament            d) Small intestine
- Q.10** All the following are endocrine glands **Except**:  
 a) Pitutary gland            b) Parotid gland            c) Ovary            d) Testis

**PART - II (35 MARKS)**

**PART – A (DESCRIPTIVE TYPE QUESTIONS) (25 MARKS)**

- Q.1** Describe Mandibular nerve under the following: (10)  
 a) Origin and intracranial course  
 b) Divisions and branches  
 c) Applied aspect
- Q.2** Draw labeled diagram to show: (3x3=9)  
 a) A typical synovial joint  
 b) Parts of urinary system  
 c) Histology of tooth
- Q.3** Write briefly on: (3x2=6)  
 a) Cleft palate  
 b) Supination and pronation of forearm  
 c) Gall bladder

**PART – B (OBJECTIVE TYPE QUESTIONS OMR SHEET) (10 MARKS)**

- Select the most appropriate response:** (10x1=10)
- Q.1** Which of the following muscles develop from first pharyngeal arch?  
 a) Geniohyoid            b) Stylohyoid            c) Omohyoid            d) Mylohyoid
- Q.2** Which one of the following arteries is a branch of internal carotid artery?  
 a) Occipital artery            b) Lingual artery  
 c) Superior thyroid artery            d) Ophthalmic artery



**BDS – 1<sup>st</sup> YEAR ANNUAL EXAMINATIONS; JUNE 2018**  
**(SUB: PHYSIOLOGY; PAPER CODE: 0210102)**

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Max. Marks: 70

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5. Illustrate your answer with diagram wherever required.

**PART - I (35 MARKS)****PART – A (DESCRIPTIVE TYPE QUESTIONS) (25 MARKS)**

- Q.1** Define the term 'synapse'. Describe its properties. (10)
- Q.2** Write short notes on: (3x3=9)
- a) Hypothalamic regulation of anterior pituitary.
  - b) Molecular mechanism of skeletal muscle contraction.
  - c) Negative feedback mechanism.
- Q.3** Answer briefly: (3x2=6)
- a) Cretinism
  - b) Parturition
  - c) Presbyopia

**PART – B (OBJECTIVE TYPE QUESTIONS OMR SHEET) (0.5x20=10 MARKS)**

- Q.1** Na<sup>+</sup>-K<sup>+</sup> pump contribution to RMP in excitable tissue is:
- a) - 4 Mv                      b) - 60 mV                      c) - 70 mV                      d) - 10mV
- Q.2** The motor unit is:
- a) muscle fiber and neurons supplying it
  - b) ventral horn cells along with its motor nerve
  - c) single motor neuron and all the muscle fibers it supplies
  - d) single muscle fiber with its nerve
- Q.3** Contractile unit of a muscle is:
- a) sarcolemma                      b) sarcomere
  - c) sarcoplasm                      d) sarcoplasmic reticulum
- Q.4** Anterolateral spinothalamic tract transmits all the following sensations **EXCEPT**:
- a) proprioception                      b) pain                      c) temperature                      d) touch
- Q.5** Which of the following is **not** transmitted in dorsal column:
- a) Pain                      b) Vibration sense                      c) Fine touch                      d) roprioception

- Q.6** Basic functional unit of the nervous system is:  
a) neuron                      b) nephron                      c) axon                      d) glomerulus
- Q.7** Which of the following is a monosynaptic reflex:  
a) withdrawal reflex                      b) stretch reflex  
c) inverse stretch reflex                      d) reciprocal inhibition
- Q.8** Sympathetic stimulation:  
a) increases heart rate and blood pressure                      b) increases intestinal motility  
c) causes constriction of pupils                      d) causes constriction of bronchioles
- Q.9** The junction between two neurons is:  
a) soma                      b) synapse                      c) telodendria                      d) reflex
- Q.10** The point behind the convex lens at which the parallel light rays are refracted is known as:  
a) principal focus                      b) nodal point                      c) blind spot                      d) near point
- Q.11** Most of the refraction in the eye occurs at the:  
a) anterior surface of cornea                      b) posterior surface of cornea  
c) anterior surface of lens                      d) posterior surface of lens
- Q.12** Myopia can be corrected by:  
a) using glasses with convex lenses  
b) using glasses with biconcave lenses  
c) cylindrical lenses placed in such a way that they equalize the refraction in all meridians  
d) no correction is needed because the eye itself can accommodate
- Q.13** Excessive growth hormone secretion in adults causes:  
a) acromegaly                      b) gigantism  
c) increased entry of glucose in muscles                      d) Grave's disease
- Q.14** All are the findings in Cushing syndrome **EXCEPT**:  
a) truncal obesity                      b) hypoglycemia  
c) moon faced appearance                      d) poor wound healing
- Q.15** Which of the following hormone is *not* secreted by anterior pituitary?  
a) thyroid-stimulating hormone                      b) leuteinizing hormone  
c) corticotrophin-releasing hormone                      d) Prolactin
- Q.16** Calcitonin is secreted by:  
a) thyroid gland                      b) parathyroid gland  
c) pituitary                      d) bone osteoclast cells
- Q.17** Milk ejection reflex is mediated by:  
a) Oxytocin                      b) Vasopressin                      c) Prolactin                      d) Oestrogen
- Q.18** Antidiuretic hormone is secreted from:  
a) anterior pituitary gland                      b) posterior pituitary gland  
c) thyroid gland                      d) papathyroid gland



- Q.8** Gastric emptying:  
 a) depends on intensity of mixing waves      b) stimulated by enterogastric reflex  
 c) not under hormonal & neural control      d) inhibited by gastrin
- Q.9** Pepsinogen is activated by:  
 a) enterokinase      b) low pH      c) trypsin      d) chymotrypsin
- Q.10** Which of the following has the highest pH:  
 a) gastric juice      b) bile in the gallbladder  
 c) pancreatic juice      d) saliva
- Q.11** Which of the following secretions get absorbed in the colon:  
 a) iron      b) proteins  
 c) bile salts      d) water and electrolytes
- Q.12** Calcium absorption in the GIT is increased by:  
 a) oxalates in the diet      b) iron overload  
 c) 1,25-dihydroxycholecalciferol      d) increased Na<sup>+</sup> absorption
- Q.13** All of the following structures lie in the renal medulla, **EXCEPT**:  
 a) juxtaglomerular apparatus      b) loop of Henle  
 c) collecting duct      d) vasa recta
- Q.14** Juxtamedullary nephrons in kidney are what percentage of total nephrons:  
 a) 15      b) 50      c) 70      d) 90
- Q.15** Renin is secreted by:  
 a) cells in the macula densa      b) cells in the distal tubules  
 c) cells in the peritubular capillary bed      d) juxtaglomerular cells
- Q.16** Atrial natriuretic peptide (ANP):  
 a) increases reabsorption of sodium from renal tubules  
 b) increases reabsorption of water from renal tubules  
 c) increases ECF volume  
 d) is secreted when blood volume is increased
- Q.17** Basic functional unit of the kidney is:  
 a) neuron      b) nephron      c) axon      d) glomerulus
- Q.18** Glomerular filtration rate is:  
 a) 125 ml/min      b) 125 L/min      c) 125 ml/hr      d) 125 L/hr
- Q.19** Normal RBC count in million/cumm is:  
 a) 5-6      b) 8-9      c) 10-12      d) 13-15
- Q.20** Normal WBC count is:  
 a) 4000-11000/cumm      b) 8000-16000/cumm  
 c) 10000-20000/cumm      d) 15000-2000/cumm

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**BDS – 1<sup>st</sup> YEAR ANNUAL EXAMINATIONS; JUNE 2018**  
**(SUB: BIOCHEMISTRY; PAPER CODE: 0210103)**

Time: 03:00 Hrs.

Max. Marks: 70

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**PART – I (35 MARKS)****PART – A (DESCRIPTIVE TYPE QUESTIONS) (25 MARKS)**

- Q.1 What are isoenzymes. Give the clinical importance of isoenzymes with the help of at least two suitable examples. Name the liver panel of enzymes. (2+6+2=10)
- Q.2 Write short notes on: (3×3=9)
- a) Significance of phospholipids.
  - b) Specific Dynamic Action
  - c) Metabolic Acidosis
- Q.3 Answer briefly: (3×2=6)
- a) Mutarotation
  - b) Structure of t RNA
  - c) Zwitter ion

**PART – B (OBJECTIVE TYPE QUESTIONS OMR SHEET) (0.5X20=10 MARKS)**

- Q.1 Synovial fluid of the joint contains:
- a) Heparin
  - b) Dermatan sulphate
  - c) Hyluronic acid
  - d) All of the above
- Q.2 The following amino acid contains sulfur:
- a) Aspartate
  - b) Histidine
  - c) Methonine
  - d) None of the above
- Q.3 Which of the following pathways occur both in cytosol and mitochondria:
- a) Urea cycle
  - b) Gluconeogenesis
  - c) Heme synthesis
  - d) All of the above
- Q.4 Which of the following enzymes act as a bio marker in diagnosis of prostatic cancer:
- a) Amylase
  - b) Lipase
  - c) Acid phosphatase
  - d) Alkaline phosphatase
- Q.5 The end product of anaerobic glycolysis is:
- a) Pyruvate
  - b) Acetyl CoA
  - c) Lactate
  - d) Phosphoenol pyruvate

- Q.6** Fluoride inhibits the following enzyme in glycolysis:
- |             |                        |
|-------------|------------------------|
| a) Aldolase | c) Hexokinase          |
| b) Enolase  | d) Phosphofructokinase |
- Q.7** The De novo biosynthesis of fatty acids occurs in:
- |                 |                    |
|-----------------|--------------------|
| a) Mitochondria | c) Nucleus         |
| b) Cytosol      | d) Plasma membrane |
- Q.8** All the following substances are synthesized from glycine except:
- |               |                |
|---------------|----------------|
| a) Creatinine | c) Epinephrine |
| b) Heme       | d) Glutathione |
- Q.9** Enzyme defect in Alkaptonuria is :
- |                          |                                    |
|--------------------------|------------------------------------|
| a) Tyrosinase            | c) Malelyl aceto acetate isomerase |
| b) Tyrosine transaminase | d) Homogentisate oxidase           |
- Q.10** The following substance is not a catecholamine:
- |                 |                    |
|-----------------|--------------------|
| a) Ethanolamine | c) Epinephrine     |
| b) Dopamine     | d) Nor Epinephrine |
- Q.11** Which one of the following substances is the end product of purine catabolism:
- |            |               |
|------------|---------------|
| a) Urea    | c) Creatinine |
| b) Ammonia | d) Uric acid  |
- Q.12**  $\gamma$  Glutamyl transpeptidase activity in serum is elevated in:
- |                       |                          |
|-----------------------|--------------------------|
| a) pancreatitis       | c) myocardial infarction |
| b) muscular dystrophy | d) alcoholism            |
- Q.13** Lactose intolerance is due to deficiency of enzyme:
- |            |                     |
|------------|---------------------|
| a) lactase | c) sucrase          |
| b) amylase | d) all of the above |
- Q.14** Enzymes act by reducing the :
- |                      |                     |
|----------------------|---------------------|
| a) activation energy | c) heat energy      |
| b) binding energy    | d) all of the above |
- Q.15** Following is an example of pentose sugar:
- |            |                      |
|------------|----------------------|
| a) glucose | c) erythrose         |
| b) ribose  | d) dihydroxy acetone |
- Q.16** Transamination reactions require following coenzyme:
- |               |                        |
|---------------|------------------------|
| a) NAD        | c) Pyridoxal phosphate |
| b) Riboflavin | d) TPP                 |
- Q.17** Ketone bodies are synthesized in:
- |           |                   |
|-----------|-------------------|
| a) Muscle | c) Liver          |
| b) Brain  | d) Adipose tissue |
- Q.18** The functionally active form of Vit D is:
- |                    |                       |
|--------------------|-----------------------|
| a) Cholecalciferol | c) Dehydrocholesterol |
| b) Ergocalciferol  | d) Calcitriol         |

**Q.19** Normal serum bilirubin level is:

- a) 0.2 to 0.8 g/dl
- b) 0.2 to 0.8 mg/dl
- c) 1 to 2 mg/ dl
- d) 3 to 5 mg/dl

**Q.20** One of the following is the most essential fatty acid in the diet:

- a) Linoleic acid
- b) Oleic acid
- c) Arachidonic acid
- d) Linolenic acid

**PART – II (35 MARKS)**

**PART – A (DESCRIPTIVE TYPE QUESTIONS) (25 MARKS)**

**Q.1** Define beta oxidation. Discuss the steps of oxidation of palmitic acid along with energetic.

Also mention about the role of carnitine in the transport of fatty acids.

**(1+3+4+2=10)**

**Q.2** Write short notes on:

**(3×3=9)**

- a) Phase II metabolism of xenobiotics.
- b) Post transcriptional modification
- c) LFT

**Q.3** Answer briefly:

**(3×2=6)**

- a) Phenylketonuria
- b) Regulation of blood sugar
- c) Genetic code

**PART – B (OBJECTIVE TYPE QUESTIONS OMR SHEET) (0.5X20=10 MARKS)**

**Q.1** Tetany due to low serum calcium level results from removal of which gland:

- a) Thyroid
- b) Para thyroid
- c) Adrenal cortex
- d) Pituitary

**Q.2** Name the hormone which contains a trace element in its structure:

- a) Nor epinephrine
- b) Testosterone
- c) FSH
- d) Thyroxine

**Q.3** Galactokinase catalyses synthesis of :

- a) Lactose
- b) Galactose
- c) Galactose-1- phosphate
- d) Glucose-6-phosphate

**Q.4** The lipids are transported from intestine in the form of :

- a) Micelles
- b) VLDL
- c) HDL
- d) Chylomicrons

**Q.5** Compound which accumulates in urine in Alkaptonuria is:

- a) Phenylacetate
- b) Homogentisic acid
- c) Phenyl lactate
- d) Phenyl pyruvate

**Q.6** Vanylllyl mandelic acid excretion in urine of man reaches very high levels in:

- a) Phaechromocytoma
- b) Pernicious anaemia
- c) Imidazol amino aciduria
- d) Pyridoxal deficiency

**Q.7** Urea cycle takes place in the:

- a) Kidney
- b) Liver
- c) Lungs
- d) Heart

- Q.8** Which immunoglobulin can cross the placental barrier:  
 a) IgA  
 b) IgM  
 c) IgG  
 d) IgD
- Q.9** The chemical nature of the primer required for the synthesis of the DNA is:  
 a) DNA  
 b) RNA  
 c) Histone  
 d) Hn RNA
- Q.10** The codons that terminate protein biosynthesis are:  
 a) UAA  
 b) UAG  
 c) UGA  
 d) All the above
- Q.11** Mitochondrial DNA is inherited from:  
 a) Mother only  
 b) Father only  
 c) Both of them  
 d) Either of them
- Q.12** Western blotting is the technique for identification of :  
 a) DNA  
 b) RNA  
 c) Carbohydrates  
 d) Proteins
- Q.13** The topological stress produced by the separation of DNA strands is relieved by:  
 a) DNA gyrase  
 b) DNA helicase  
 c) DNA polymerase  
 d) All of the above
- Q.14** Which part of the RNA polymerase recognizes TATATA box:  
 a)  $\alpha$  subunit  
 b)  $\beta$  subunit  
 c) sigma factor  
 d) Rho factor
- Q.15** Initiation codon is recognized in eukaryotic translation with the help of :  
 a) Elf-4F  
 b) Shine dalgarno sequence  
 c) Kozak consensus sequence  
 d) Elf-2
- Q.16** One of the following molecules is required for transfer of cholesteryl esters from HDL to other lipoproteins in exchange for TG:  
 a) LCAT  
 b) CETP  
 c) ACAT  
 d) Lipoprotein lipase
- Q.17** Refsums disease occurs due to accumulation of the following fatty acid:  
 a) Palmitic acid  
 b) Arachidonic acid  
 c) Oleic acid  
 d) Phytanic acid
- Q.18** The amino acid which is purely ketogenic is:  
 a) Leucine  
 b) Iso leucine  
 c) Tyrosine  
 d) Tryptophan
- Q.19** Which of the following tissues can derive energy only from glucose:  
 a) Brain  
 b) Cardiac muscle  
 c) Adipose tissue  
 d) Erythrocytes
- Q.20** The key enzyme in fatty acid synthesis is:  
 a) Acetyl CoA carboxylase  
 b) Acetyl transacylase  
 c) Ketoacyl synthase  
 d) Enoyl reductase

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**BDS – 1<sup>st</sup> YEAR EXAMINATIONS; JUNE 2018**  
**[SUB: DENTAL ANATOMY, EMBRYOLOGY AND ORAL HISTOLOGY]**  
**(PAPER CODE: 0210104)**

(Re - appear)

Time: 03:00 Hrs.

Max. Marks: 70

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**PART-I**

**Long Essay:**

**Q.1** Discuss in detail amelogenesis and life cycle of ameloblasts. (9)

**Short Essay:**

**Q.2** Attempt any 4 of the following questions: (4x5=20)

- a) Dentinal sclerosis
- b) Age changes in pulp
- c) Stellate reticulum
- d) Theories of tooth eruption
- e) Difference in permanent and deciduous dentition

**Brief Answers:**

**Q.3** Attempt any three of the following: (3x2=6)

- a) Gnarled enamel
- b) Dead tracts
- c) Histology of palate
- d) Development of tongue

**PART-II**

**Long Essay:**

**Q.4** Discuss the stages in development of tooth with special emphasis on gene involved. (9)

**Short Essay:**

**Q.5** Attempt any 4 of the following questions: (4x5=20)

- a) Ductal modification of saliva
- b) Reduced enamel epithelium
- c) Basement membrane
- d) Lingual aspect of maxillary canine
- e) Hunter schrenger band

**Brief Answers:**

**Q.6** Attempt any three of the following: (3x2=6)

- a) FDI notation
- b) Nerve supply to pulp
- c) Gubernacular canal and cord
- d) Enamel niche

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**PART – I (35 MARKS)****PART – A (DESCRIPTIVE TYPE QUESTIONS) (25 MARKS)**

- Q.1** Write in detail about histopathology of hard palate. (10)
- Q.2** Write Short notes on: (3x3=9)
- a. stellate reticulum
  - b. age changes of pulp
  - c. types of spongiosa
- Q.3** Answer briefly: (3x2=6)
- a. perikymata
  - b. intermediate cementum
  - c. clear cells

**PART – B (OBJECTIVE TYPE QUESTIONS OMR SHEET) (0.5 X 20=10 MARKS)**

- Q.1** Sub microscopic structure of enamel shows all except
- a. Rods measure about 5µm in breadth & 9µm in length
  - b. Apatite crystal are arranged approximately parallel to long axis of the prism
  - c. Generally rods are oriented at right angle to dentin surface
  - d. None
- Q.2** Parazonas&diazones are
- a. Bands of Hunter Schreger
  - b. Bands of Gnarled enamel
  - c. Band of neonatal line
  - d. None
- Q.3** All are hypomineralized structure except
- a. Gnarled enamel
  - b. Neonatal line
  - c. Enamel tuft
  - d. None
- Q.4** All is true about surface structure of enamel,except
- a. Prism less layer is mostly seen in cuspal tips & cervical areas
  - b. Perikymata are external manifestation of striae of retzius
  - c. Cracks are actually outer edges of enamel lamellae
  - d. None
- Q.5** The first layer that cover the crown of newly erupted tooth is
- a. Primary Enamel cuticle
  - b. Nasmyth membrane
  - c. Pellicle
  - d. Both a &b

- Q.6** Wrong statement about enamel lamellae is
- They are confine to enamel only & does not penetrate dentin
  - On decalcification Cracks disapper but lamellae persist
  - Three types of lamellae are recognized
  - Both a & b
- Q.7** Structure originate from odontoblastic process is
- Enamel spindle
  - Enamel tuft
  - Enamel lamellae
  - Gnarled enamel
- Q.8** Wrong statement is
- Older teeth shows reduced permeability to fluids
  - As age advances teeth becomes resistant to decay
  - With age facial & lingual surface loose structure more rapidly than proximal
  - None
- Q.9** Untrue statement about amelogenesis is
- Bulk of head of each rod is formed by 4 ameloblastwheras tail is contributed by 1 ameloblast
  - Reduced enamel epithelium secrete enzymes in desmolytic stage
  - The process of maturation starts from height of crown & progress cervically
  - Both a & b
- Q.10** All is true statement about dentin ,except
- Tubules are apart in peripheral layer & are closely packed near pulp
  - Diameter of tubule is more near pulp than at outer ends
  - Number of tubule per unit area on pulpal & outer surface of dentin is in ratio of 1:4
  - none
- Q.11** Peritubular dentin has all the features , except
- 9% more mineralized than intertubular dentin
  - Surrounds the wall of tubule in all but the dentin near the pulp
  - 4% less mineralized than intertubular dentin
  - Both b & c
- Q.12** Wrong statement is
- Pre dentin is located adjacent to pulp tissue
  - Mantle dentin is located adjacent to dentino enamel junction
  - Pre dentin is hypomineralized
  - Intertubular dentin is hypomineralized
- Q.13** All is true except
- Circumpulpal dentin represent dentin formed before root completion
  - Secondary dentin is formed after root completion
  - Circumpulpal may be more mineralized than mantle dentin
  - None
- Q.14** Wrong statement is
- Tertiary dentin is formed by newly differentiated odontoblast formed by ectomesenchymal cells
  - Incremental lines of dentin are called as Von Ebner
  - The dentinal tubules does not pass through interglobular dentin
  - Accentuated incremental line of dentin are called as contour lines of owen

**Q.15** Which of the following appears dark in reflected light microscopy

- a. Dead tracts
- b. Transparent dentin
- c. Interglobular dentin
- d. All

**Q.16** Wrong statement regarding dentinogenesis

- a. Begin at cusp tips
- b. Earliest crystal deposition is in the form of very fine plates of hydroxyapatite
- c. Korff's fibers seen at time of initial dentin deposition
- d. None

**Q.17** Smallest pulp volume is seen in which tooth

- a. mandibular central incisor
- b. mandibular lateral incisor
- c. mandibular canine
- d. maxillary lateral incisor

**Q.18** Wrong statement is

- a. every person normally has 52 pulp organ
- b. number of pulp horn depends on number of cusps
- c. reduction in size of pulp is due to deposition of dentin which progresses faster on floor than on roof or walls
- d. none

**Q.19** Untrue about cell free zone of pulp is

- a. also called as zone of weil
- b. present below odontoblastic zone
- c. parietal layer is present here
- d. none

**Q.20** All is true of structure of pulp except

- a. Fibroblast are most numerous after undifferentiated ectomesenchymal cells
- b. Inactive fibroblast is called as fibrocytes
- c. Fibroblast of pulp not only form collagen fibre but also ingest the same matrix
- d. Both a & c

## PART – II (35 MARKS)

### PART – A (DESCRIPTIVE TYPE QUESTIONS) (25 MARKS)

**Q.1** Discuss in detail about all the anatomical aspects of permanent maxillary first pre molar. **(10)**

**Q.2** Write short notes on

- a. nomenclature
- b. compensatory curves
- c. histopathology of maxillary sinus

**(3x3=9)**

**Q.3** Answer briefly:

- a. Function of saliva
- b. reactionary dentin
- c. fibres of periodontal ligament

**(3x2=6)**

### PART – B (OBJECTIVE TYPE QUESTIONS OMR SHEET) (0.5 X 20=10 MARKS)

**Q.1** Incorrect statement is

- a. Cementum is thickest at the Apex of root
- b. Cementum is sensitive to pain
- c. Cementum is softer than dentin
- d. None

- Q.2** Incremental lines of cementum are called as
- Von ebner
  - Contour lines
  - Lines of saltier
  - No incremental lines found
- Q.3** Untrue statement is
- cemantum is resistent to resorption in younger age
  - Acellular afibrillarcementum is limited to cervical enamel surface
  - Acellular extrinsic fibre cementum extend from cervical margin to 2/3 of root
  - Cellular cementum is essential for tooth support
- Q.4** All statement are true ,except
- Alveolar bone also called as cribri form plate
  - Radiographically alveolar bone also called as lamina densa
  - Inner aspect of alveolar bone is called as Bundle bone
  - None
- Q.5** Wrong statement about bundle bone is
- Contains more intrinsic fibre than lamellar bone
  - Extrinsic fibre bundle are embedded in bundle bone
  - It directly lines the inner aspect of socket
  - None
- Q.6** Correct arrangement of salivary ductal system is
- Secretory end piece→intercalated duct→striated duct→excretory duct
  - Secretory end piece→striated duct→intercalated duct→excretory duct
  - Intercalated duct→striated duct→ Secretory end piece→ excretory duct
  - Secretory end piece←intercalated duct←striated duct←excretory duct
- Q.7** Duct mainly helping in modification of saliva is
- Intercalated duct
  - Striated duct
  - Excretory duct
  - Both a & c
- Q.8** Incorrect statement is
- Serous cells are pyrimidal shape
  - Generally serous cell produce glycoprotein
  - Zymogen granule is present in apex of mucous cell
  - None
- Q.9** Primary saliva is formed by
- secretory end piece
  - intercalated duct
  - striated duct
  - both a & b
- Q.10** Final saliva is
- hypotonic
  - hypertonic
  - isotonic
  - can be anything
- Q.11** Untrue statement about Myoepithelial cell is
- also called as basket cell
  - present between basal lamina & secretory cell
  - Only associated with end piece & not with ductal cells
  - They have similarity to smooth muscle cell

**Q.12** Lysozyme and lactoferrin are secreted by which ductal cells

- a. Intercalated duct cells
- b. Striated duct cells
- c. Excretory duct cells
- d. secretory end piece cells

**Q.13** Minor salivary glands are absent in

- a. Anterior part of hard palate
- b. Gingiva
- c. Vestibule
- d. Both a and b

**Q.14** Articular surface of TMJ is covered by

- a. hyalin cartilage
- b. fibrous tissue
- c. elastic cartilage
- d. not specific

**Q.15** Ligaments of TMJ are

- a. sphenomandibular
- b. stylomandibular
- c. lateral
- d. all

**Q.16** Cementosomes are seen in which layer of oral epithelium

- a. upper layer of Stratum spinosum
- b. Stratum Basale
- c. Stratum Granulosum
- d. Both a & c

**Q.17** Cells of which layer are most active in protein synthesis

- a. Stratum spinosum
- b. Stratum Basale
- c. Stratum Granulosum
- d. Stratum Corneum

**Q.18** What is the origin of basal lamina

- a. Connective tissue
- b. Epithelium
- c. Can be both
- d. none

**Q.19** Incorrect statement is

- a. Basal cell of oral epithelium are made up of two population
- b. Lamina densa is present immediately below basement membrane
- c. Connective tissue is also called as lamina propria
- d. Both a & b

**Q.20** Lamellated granule are present in which layer of oral epithelium

- a. stratum basale
- b. lower part of stratum spinosum
- c. upper part of prickly cell layer
- d. stratum granulosum

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