

**MANIPAL UNIVERSITY****FIRST BDS DEGREE EXAMINATION – NOVEMBER/DECEMBER 2014****SUBJECT: DENTAL ANATOMY, EMBRYOLOGY AND ORAL HISTOLOGY (ESSAY)**

Monday, December 01, 2014

Time: 14:15 – 17:00 Hrs.

Maximum Marks: 60

✂ **Answer all the questions. Draw diagrams wherever necessary.**

✂ **Essay questions.**

1. Classify oral mucosa. Write in detail the light microscopic and electron microscopic features of gingiva.

(2+3+5 = 10 marks)

2. Write in detail the buccal, lingual, mesial, distal and occlusal morphology of maxillary first premolar. Give an account on its chronology.

(2+1+2+1+2+2 = 10 marks)

3. **Write Short notes on:**

3A. Root formation

3B. Microscopic features of serous acini

3C. Pulp stones

3D. Differences between cellular and acellular cementum

3E. Enamel lamellae and enamel spindles

3F. Occlusal aspect of permanent mandibular first molar

3G. Odontoblasts

3H. Tooth numbering systems

3I. Fixation

2J. Matrix vesicle theory

(4 marks × 10 = 40 marks)



**MANIPAL UNIVERSITY****FIRST BDS DEGREE EXAMINATION – NOVEMBER/DECEMBER 2014**  
**SUBJECT: GENERAL ANATOMY INCLUDING EMBRYOLOGY & HISTOLOGY (ESSAY)**

Friday, November 28, 2014

Time: 14:15 – 17:00 Hrs.

Maximum Marks: 60

- ✍ **All questions are compulsory. Write brief, clear, relevant and legible answers.**  
✍ **Illustrate your answers with diagrams and flow-charts wherever appropriate.**

1. Describe thyroid gland under the following:

- 1A. Location and extent
- 1B. Relations
- 1C. Blood supply
- 1D. Applied aspect

(1+5+3+1 = 10 marks)

2. Explain the origin, course, branches &amp; distribution of mandibular nerve with its applied aspects.

(1+3+5+1 = 10 marks)

3. **Write short notes on:**

- 3A. Buccinator
- 3B. Microscopic structure of hyaline cartilage
- 3C. Structural abnormalities of chromosomes
- 3D. Cleft palate
- 3E. Pterion
- 3F. Sutures
- 3G. Parotid duct
- 3H. Implantation
- 3I. Microscopic structure of liver
- 3J. Ansa cervicalis

(4 marks × 10 = 40 marks)



**MANIPAL UNIVERSITY****FIRST BDS DEGREE EXAMINATION – NOVEMBER/DECEMBER 2014****SUBJECT: GENERAL HUMAN PHYSIOLOGY AND BIOCHEMISTRY (ESSAY)**

Saturday, November 29, 2014

Time: 14:15 – 17:00 Hrs.

Maximum Marks: 60

- ✍ Answer Section “A” and Section “B” in two separate answer books.  
✍ Draw diagrams and flow charts wherever necessary.

**SECTION – A : HUMAN PHYSIOLOGY: 30 MARKS**

✍ Essay:

1. Explain the digestion and absorption of dietary lipids in the gastrointestinal tract. List all the features of obstructive jaundice.  
(6+4 = 10 marks)

2. Short Answer Type:

- 2A. Draw a labeled diagram of the oxygen-haemoglobin dissociation curve. List all the factors which shift the curve to the left.  
2B. Briefly explain the physiological actions of parathyroid hormone which help regulate blood calcium levels.  
2C. Define Frank Starling law of the heart. Explain any two factors that affect venous return to the heart.  
2D. Define Glomerular Filtration Rate. Mention how various factors can affect glomerular filtration rate.  
2E. Briefly explain the role of the inner ear in discriminating sounds of different frequencies.  
(4 marks × 5 = 20 marks)

**SECTION – B : BIOCHEMISTRY: 30 MARKS**

- 3A. Write the steps of anaerobic glycolysis. Calculate its energetics.  
(4+1= 5 marks)
- 3B. Discuss vitamin D metabolism under the following headings:  
i) Sources & RDA  
ii) Formation  
iii) Functions  
(1+2+2 = 5 marks)

4. Answer the following:

- 4A. Describe the structure of collagen.  
4B. Define basal metabolic rate. Add a note on factors affecting BMR.  
4C. Outline the formation of uric acid in the body.  
4D. Enumerate the functions of phospholipids.  
(3 marks × 4 = 12 marks)

5. Write a brief note on:

- 5A. Micelles  
5B. Cori cycle  
5C. Phenylketonuria  
5D. Alpha helix  
(2 marks × 4 = 8 marks)

