**B.Sc. [Medical (Part-I)]**

### BF/2016/03

# Anatomy

## Time : 3 Hours Max Marks : 100

*Note: Attempt all the questions.*

 *Draw suitable diagrams.*

**USE SEPARATE ANSWER SHEET FOR EACH PART.**

##### PART – I

1. Describe the interior of Anal Canal, Blood Supply, Nerve Supply and Applied aspects of Anal Canal. [20]

2. Write in brief Classification of Synovial Joints with examples. [10]

3. **Write Short Notes on** :- [4x5=20]

 a. Derivatives of Mesoderm.

 b. Foot Drop.

 c. Hamstring Muscles.

 d. Femoral Canal.

##### PART –II

1. Describe the Venous drainage of Lower Limb and its applied aspects.

[20]

2. Write in brief about the Lymphatic drainage of Stomach. [10]

3. **Write Short Notes with well labeled diagrams** :- [4x5=20]

 a. Boundaries and Contents of Popliteal Triangle.

 b. Microstructure (Histology) of Lymph Node.

 c. Fertilization.

 d. Anterior relations of Right and Left Kidney.

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**B.Sc. [Medical (Part-I)]**

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# Biochemistry

## Time : 3 Hours Max Marks : 100

*Note: Attempt all questions.*

**USE SEPARATE ANSWER SHEET FOR EACH PART.**

##### PART – I

1. Briefly discuss the secondary structure of Proteins with examples. [20]

2. Briefly discuss the functions and deficiency manifestations of Vitamin D. [10]

3. **Write Short Notes on** :- [4x5=20]

 (a) Surface Tension.

 (b) Difference between DNA and RNA.

(c) Significance of Cholesterol.

 (d) mRNA.

##### PART – II

1. Enumerate 5 enzymes of diagnostic significance indicating the relevant clinical condition and reference range. [20]

2. Classification of Fatty Acids. [10]

3. **Write Short Notes on** :- [4x5=20]

 (a) Zwitterions.

 (b) Epimers.

(c) Essential Amino Acids.

 (d) Radiation Hazards.

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# Physiology

## Time : 3 Hours Max Marks : 100

*Note: Attempt all questions.*

**USE SEPARATE ANSWER SHEET FOR EACH PART.**

##### PART – I

1. Describe the Fluid Mosaic Model of Plasma Membrane with suitable labeled diagram. [20]

2. Explain the mechanism of Primary active transport across the cell membrane with suitable example. [10]

3. **Write Short Notes :-** [4x5=20]

 a. Peroxisomes.

 b. Plasma Proteins.

 c. Mechanism promoting Heat Loss from Body.

 d. Peristalsis.

##### PART – II

1. Discuss about composition, secretion and functions of Gastric Juice. [20]

2. Describe the Endocrine Functions of Kidney. [10]

3. **Write Short Notes :** [4x5=20]

 a. Lymphocyte.

 b. Extracellular Fluid.

 c. Water Reabsorption in Renal Tubules.

 d. Saliva.

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**B.Sc. [Medical (Part-I)]**

### BF/2016/03

# Medical Statistics & Research Methodology

## Time : 3 Hours Max Marks : 80

*Note: Attempt all questions.*

 ***Use of Simple Calculator is allowed.***

**USE SEPARATE ANSWER SHEET FOR EACH PART.**

##### PART – I

1. What do you mean by Tests of Significance? Enumerate steps involved in tests of significance. Also discuss any one test of significance, clearly stating Null Hypothesis to be tested. [12]

2. Calculate Mean and Standard Deviation from the following data. [8]

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Protein intake(gm/day)** | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 |
| **No of Families** | 9 | 15 | 18 | 5 | 3 |

1. **Write short notes on the following** :- [4x5=20]

a. Power of the Test.

b. Problem of Non-Response in Surveys.

c. Types of Data.

d. Validity of Data.

##### PART –II

1. Enumerate advantages and disadvantages of Sampling over Complete Enumeration. Discuss Systematic Sampling Design used in conducting medical surveys. [12]

2. What are the main components of a scientific report? Discuss these components for one scientific study which you would like to undertake by stating clearly the Null Hypothesis and alternate hypothesis of your study. [8]

3. **Give short answers of the following questions mentioning clearly the points of differentiation between the terms specified below:** [4x5=20]

 a. Questionnaires and Interview Schedules used for data collection.

 b. Measures of Central Tendency and Measures of Dispersion.

 c. Cluster Sampling and Multistage Sampling.

 d. Type I and Type II Errors in Testing of Hypothesis.

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