

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

BF/2009/07

Anatomy

M.M. : 100

Time : 3 Hours

Note: Attempt all questions. Illustrate your answers with suitable diagrams.

1. **Describe the Stomach under the following headings:**
 - a. Parts & relations.
 - b. Blood supply.
 - c. Lymphatic drainage.

[3x4=12]
2. **Describe the Ankle joint under the following headings:**
 - a. Articular surfaces.
 - b. Ligaments.
 - c. Movements.
 - d. Applied anatomy.

[4x4=16]
3. **Describe the Ischiorectal fossa under the following headings:**
 - a. Position.
 - b. Boundaries.
 - c. Contents.
 - d. Applied anatomy.

[4x4=16]
4. **Classify and describe the different types of Synovial joints in the body with examples of each.**

[20]
5. **Write briefly on:**
 - a. Transitional epithelium.
 - b. Umbilicus.
 - c. Implantation.
 - d. Meckel's diverticulum.
 - e. Varicocele.

[5x4=20]
6. **Describe the Spleen under the following headings:**
 - a. Position. [4]
 - b. Relations. [4]
 - c. Blood supply. [4]
 - d. Applied anatomy. [4]

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Physiology

M.M. : 100

Time : 3 Hours

Note: *Attempt SIX questions in all, except the last **(Q.NO. 8)** which is **COMPULSORY**. Draw diagrams wherever necessary.*

1. What is Landsteiner's law. What is 'Rh' Blood group. What is Haemolytic disease of new born. How do you prevent it. [16]
2. Write down structure and functions of Platelets. [16]
3. Write down composition, functions and mechanism of secretion of Saliva. [16]
4. What is the structure of Small intestine. Describe different types of Intestinal movements. [16]
5. Write down in detail the structure of Nephron. Write down the difference in Cortical and Juxta-medullary nephrons. [16]
6. Write down the structure and functions of Cell membrane. [16]
7. **Write notes on:** [16]
 - a. Na- K Pump.
 - b. Facilitated diffusion.
8. **Write short notes on:** [20]
 - a. Heparin.
 - b. AIDS.

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Medical Statistics & Research Methodology

M.M. : 80

Time : 3 Hours

Note: Use of Simple Calculator is allowed.

SECTION-A

All questions are Compulsory. Each question carries Four marks. [5x4=20]

1. Explain the objectives of Sampling theory.
2. Define Simple and Composite hypotheses.
3. Explain properties of Arithmetic mean.
4. Define Random & Non-random sampling.
5. Give the importance of Standard error.

SECTION-B

Attempt any Four Questions. Each Question carries 15 marks.

- 1a. Discuss the simple random sampling and its methods. [7]
- 1b. **A Population of size 100 is divided into four strata whose sizes are:**
 $N_1=40, N_2=10, N_3=20, N_4=30$ and variances (S_i^2) are 2, 3, 4, 5 respectively.
How would you draw samples of size 20 according to two allocations[Proportional and Optimum]. [8]
- 2a. Discuss the criteria of selecting a sampling procedure. [7]
- 2b. **Find Mode and Median from the following data:**

Class Interval:	5-10	10-15	15-20	20-25	25-30	30-35
Frequency	2	9	29	54	11	6

 [8]
- 3a. Discuss the role of Interview method in data collection. [7]
- 3b. Find Mean & Standard deviation from the following data: [8]

Income between(Rs.):	100-200	100-300	100-400	100-500	100-600
No. of Persons	15	33	63	83	100
- 4a. Discuss the important steps in preparing the scientific reports. [7]
- 4b. Obtain the Regression equations from the following data: [8]

X:	57	58	59	60	61	62	64
Y:	77	78	75	82	82	79	81
- 5a. Discuss the problems in Representative sample. [7]
- 5b. The Arithmetic mean and Standard deviation of 20 observations were calculated by a student as 20 and 5 respectively. But while calculating them, an item 13 was misread as 30. Explain how will you find the correct Mean & Standard deviation. [8]
6. **Write short notes on:** [3x5=15]
 - a. Difference between Correlation and Regression.
 - b. Usefulness of Percentile in medical statistics.
 - c. Confidence limits.
