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B.Sc. [Medical (Part-I)]
BF/2007/11

Anatomy

M.M. : 100

Time : 3 Hours

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

1. Describe lobes structure, blood supply and age changes of Prostate. [12]
 2. Draw labeled diagrams to show: [4x5=20]
 - a. Relations of 4th part of Duodenum
 - b. Structure under cover of Gluteus maximus
 - c. Histology of Compact bone
 - d. Posterior relations of Caecum
 3. Describe the Sacroiliac Joint under the following headings: [12]
 - a. Articular surfaces
 - b. Ligaments
 - c. Movement
 - d. Nerve supply
 4. Write in brief about: [2x10=20]
 - a. Uterine tubes
 - b. Blood supply and descent of the testis
 5. Write in brief on: [4x6=24]
 - a. Ovary
 - b. Abductor canal
 - c. Hystero Salpingography
 - d. Placenta
 6. Write short notes on: [3x4=12]
 - a. Epiploic foramen.
 - b. Histology of Ureter.
 - c. Marginal artery.
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Physiology

M.M. : 100

Time : 3 Hours

Note: Attempt *SIX* questions, out of which **Q.No. 1** is **COMPULSORY**.

1. Describe the various types of Hemoglobin and factors controlling hemoglobin formation. [20]
 2. Write the stages of Thrombopoiesis and describe the functions of Platelets. [16]
 3. Describe the formation, composition, function and regulation of Gastric Juice secretion. [16]
 4. Write the functions of Gastrointestinal hormones. Describe how they are released. [16]
 5. Describe the renal regulation of Acid-base-balance. [16]
 6. Describe the mechanisms of Heat gain and Heat loss in the body. [16]
 7. Write notes on: [16]
 - a. Transport across membrane.
 - b. Body fluids.
 8. Write short notes on: [16]
 - a. Heat Stroke.
 - b. Translation.
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Biochemistry

M.M. : 100

Time : 3 Hours

Note: Attempt any FIVE questions.

1. **Write short notes on:** [4x5=20]
 - a. Fatty acids.
 - b. Donann's equilibrium.
 - c. Sterols.
 - d. Blood buffers.
 2.
 - a. Define Enzyme, Co-enzyme, Holoenzyme, Apoenzyme and Isoenzyme with examples. Write about mechanisms of enzyme actions. [10]
 - b. Give a note on physical factors which affect enzyme activities. [10]
 3. Write in detail about Vitamin D and Vitamin E. [20]
 4. Mention the differences between DNA and RNA. Describe the structure and functions of different types of RNA. [20]
 5.
 - a. Mention the various Plasma proteins with their biological functions. [10]
 - b. Briefly describe the process of Detoxification of harmful foreign compounds in our body. [10]
 6.
 - a. Describe the various Colour reactions performed for Carbohydrates. [10]
 - b. Give a detail note on isomerism of Monosaccharides. [10]
 7. **Write short notes on:** [4x5=20]
 - a. Radioactive iodine.
 - b. Primary and secondary structure of proteins.
 - c. Acidosis.
 - d. Mucopolysaccharides.
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B.Sc. [Medical (Part-I)]

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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. Define Quota sampling.
2. Define Null hypothesis & Alternative Hypothesis.
3. Define Mode and give its merits and demerits.
4. Explain the follow-up of non-respondents in data collection.
5. Define type I and type II errors.

SECTION-B

Attempt any Four Questions. Each Question carries 15 marks.

- 1a. Define Arithmetic mean. Give its merits and demerits. [7]
- 1b. Calculate Median & Mode for the following frequency distribution:

Marks	No. of students
45-50	10
40-45	15
35-40	26
30-35	30
25-30	42
20-25	31
15-20	24
10-15	15
5-10	7

[8]

- 2a. What are the principal steps in a Sample survey. [7]
- 2b. Calculate the Standard deviation and its Coefficient from the following data: [8]

Age[in yrs]	:	20-25	25-30	30-35	35-40	40-45	45-50
No. of Persons	:	170	110	80	45	30	35

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3a. What is Standard error? How it is useful in hypothesis testing? Discuss. [7]

3b. Calculate the Rank correlation for the following heights in inches of father(X) and their sons[Y]: [8]

X	:	65	66	67	67	68	69	70	72
Y	:	67	68	65	68	72	72	69	71

4a. Explain the following terms: [8]

- i) Scatter diagram ii) Linear and non Linear correlation

4b. In a Correlation study, the following values are obtained: [7]

	<u>X</u>	<u>Y</u>
Mean	65	67
Standard deviation	2.5	3.5
Coefficient of Correlation	0.8	

Find the two regression lines that are associated with above data.

5a. What are the characteristics of a good Questionnaire? Explain them. [7]

5b. How scientific reporting is prepared? [8]

6. Write short notes on the following: [3 x5=15]

- Medical Statistics.
- Confidence limits in hypothesis testing.
- Interview method of data collection.
