

118

**B.Sc. [Medical (Part-I)]**  
**BF/Supp/2008/05**

**Anatomy**

**M.M. : 100**

**Time : 3 Hours**

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

1. **Describe the femoral nerve under the following headings:** [3x4=12]
    - a. Origin.
    - b. Course.
    - c. Branches.
  
  2. Enumerate the structures under cover of Gluteus Maximus and describe the Gluteal muscles with a note to the applied anatomy. [16]
  
  3. **Describe Kidneys under the following headings:** [4x4=16]
    - a. Gross anatomy.
    - b. Posterior relations.
    - c. Blood supply.
    - d. Applied anatomy.
  
  4. Classify and describe different types of Muscles of body. Add a note to the histological structure of different types of muscles. [20]
  
  5. **Describe briefly:** [5x4=20]
    - a. Derivatives of Endoderm.
    - b. Primitive streak.
    - c. Lesser Sac.
    - d. Pudendal Canal.
    - e. Femora Sheath.
  
  6. Describe Anal-Canal. Add a note to its applied anatomy. [16]
-

/119

**B.Sc. [Medical (Part-I)]**  
BF/Supp/2008/05

**Physiology**

**M.M. : 100**

**Time : 3 Hours**

**Note:** Attempt any SIX questions, except the last **(Q.NO. 8)** which is **COMPULSORY**.

1. Describe the structure, synthesis, functions, types and catabolism of Haemoglobin. [16]
  2. Define Anaemia and describe various types of Anaemia. [16]
  3. Describe the composition, functions and regulation of Gastric Juice. [16]
  4. Describe the mechanism of Clotting in detail. [16]
  5. Describe the structure and various transport processes occurring across the Cell membrane. [16]
  6. Describe the role of Renin angiotensin system and atrial natriuretic peptide in regulating the volume and concentration of body fluids. [16]
  7. **Write notes on:** [16]
    - a. Digestion and Absorption of Fat.
    - b. Functions of Plasma proteins.
  8. **Write short notes on:** [20]
    - a. Juxtaglomerular apparatus.
    - b. Dietary fiber.
-

**B.Sc. [Medical (Part-I)]**  
**BE/Supp/2008/05**

126

**Biochemistry**

**M.M. : 100**

**Time : 3 Hours**

Note: *Attempt any FIVE questions.*

1. **Write short notes on:** [4x5=20]
    - a. Polysaccharides.
    - b. Inhibitors of enzyme activities.
    - c. Muta rotation of glucose.
    - d. Classification of amino acids.
  
  2. Write in detail about Vitamin C and Vitamin K. [10+10=20]
  
  3.
    - a. Write a note on Plasma proteins. [10]
    - b. Discuss about detoxification of foreign compounds in our body. [10]
  
  4. Discuss about various colour reactions of Carbohydrate. [20]
  
  5. Define Lipids. How to classify lipids. Write a detailed note on Phospholipids. [20]
  
  6. **Write short notes on:** [4x5=20]
    - a. Medical uses of radio-isotopes.
    - b. Blood buffers.
    - c. Differences between RNA and DNA.
    - d. Isoenzymes.
-

121

**B.Sc. [Medical (Part-I)]**  
**BF/Supp/2008/05**

**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. What are limitations of Sampling?
2. Define positional average.
3. Define Quota sampling.
4. Define controlled and uncontrolled observations.
5. What is standard error?

**SECTION-B**

*Attempt any Four Questions. Each Question carries 15 marks.*

1. a. Discuss the role of Interview method in the collection of data.  
b. Find the median, lower and upper quartiles & 60<sup>th</sup> percentile for the following distribution.

<b>Marks:</b>	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
<b>Frequency:</b>	2	18	30	45	35	20	6	3
<b>Of students</b>								

[7+8=15]

2. a. Discuss the simple random sampling and its methods. [7]  
b. Find mean and standard deviation of the following distribution:  
C.I. : 15-20 20-25 25-30 30-35 35-40 40-45 45-50 50-55  
Frequency: 2 5 8 11 15 20 20 17  
C.I. : 55-60 60-65 65-70 70-75  
Frequency: 16 13 11 5 [8]

3. a. Discuss the advantages of sample surveys over the census surveys.  
b. Calculate the Co-efficient of correlation for the following data:  
X: 78 36 98 25 75 82 90 62 65 39  
Y: 84 51 91 60 68 62 86 58 53 47  
[7+8]

4. a. Discuss the steps in testing of the hypothesis. [7]  
b. Discuss the preparation of the scientific reports. [8]

5. a. Differentiate between Correlation and Regression. [7]  
b. Given the following data:  
X: 1 2 3 4 5 6 7 8 9  
Y: 9 8 10 12 11 13 14 16 15  
Find the equations of the lines of regression. [8]
6. **Write short notes on:** [3x5=15]  
a. Problems of representative sample.  
b. Usefulness of percentiles in medical statistics.  
c. Confidence limits.
-

**B.Sc. [ Medical (Part-II) ]**  
**BF/2008/05**

188

**Anatomy**

**M.M. : 100**

**Time : 3 Hours**

*Note: Attempt all questions.*

1. **Enumerate:** [5x3=15]
    - a. Branches of Axillary nerve.
    - b. Branches of Superior Mesenteric artery.
    - c. Structure in inlet of Thorax.
    - d. Structures passing deep to extensor retinaculum at wrist.
    - e. Abductor of Shoulder.
  
  2. **Draw labeled diagram to show:** [4x5=20]
    - a. Histology of Testis.
    - b. Histological structure of Ileum.
    - c. Histological structure of Cardiac Muscle.
    - d. Histological structure of Hyaline Cartilage.
  
  3. Describe the boundaries and contents of Cubital Fossa. [16]
  
  4. **Write briefly on:** [3x7=21]
    - a. Meckle's diverticulum.
    - b. Annular Pancreas.
    - c. Relations of Left Kidney.
  
  5. **Write short notes on:** [2x7=14]
    - a. Lymphatic drainage of Stomach.
    - b. Adductor Canal.
  
  6. **Write briefly on:** [2x7=14]
    - a. Erb's Palsy.
    - b. Wrist drop.
-

170

**B.Sc. [ Medical (Part-II) ]**  
**BF/2008/05**

**Physiology**

**M.M. : 100**

**Time : 3 Hours**

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

1. Define Blood Pressure. What are the factors affecting it. Write down the mechanism of regulation of arterial blood pressure in human beings. [20]
2. What are the differences between Myelinated and Unmyelinated nerves. Describe the process of Myelinogenesis in peripheral nerves. [20]
3. **Draw labeled diagrams of the following:** [10+10]
  - a. Oxygen(O<sub>2</sub>) - Haemoglobin dissociation curve.
  - b. Action potential in Neuron.
4. **Write short notes on:**
  - a. Chloride shift. [7]
  - b. Diffusion capacity of lungs. [7]
  - c. S-T segment of ECG. [6]
5. **Write in brief on:**
  - a. Starling Law of Heart. [7]
  - b. Role of Chemoreceptors in regulation of Respiration. [7]
  - c. Cardiac pacemaker. [6]
6. **Write briefly on:**
  - a. Vitamin 'D'. [7]
  - b. Obesity. [7]
  - c. Pellegra. [6]
7. **Write short notes on:**
  - a. Isotonic and Isometric contraction of muscles. [7]
  - b. Heart sounds. [7]
  - c. Orthodromic conduction in nerve. [6]
8. Discuss the mechanism of absorption of Fat. [20]

127

**B.Sc. [ Medical (Part-II) ]**  
**BF/2008/05**

**Biochemistry**

**M.M. : 100**

**Time : 3 Hours**

*Note: Attempt any FIVE questions.*

1. a. Describe the process of Glycolysis and give energetics of aerobic and anaerobic glycolysis. [10]  
b. Give an account of regulation of Glycogen synthesis and breakdown. [10]
  2. a. Describe the process of beta oxidation and energetics. [10]  
b. Discuss two conditions where excess production of Ketone bodies occurs and clinical presentation due to these conditions. [10]
  3. a. Give an account of transamination with two examples. What is the metabolic importance of transamination. [10]  
b. Discuss the steps of catabolism of Phenyl alanine and inborn errors associated with them. [10]
  4. a. Give sources of Carbon and nitrogen in purines and pyrimidines. [10]  
b. **Write short notes on:**  
i) Orotic aciduria. [5]  
ii) Lesch Nyhan syndrome. [5]
  5. a. Describe the process of synthesis and secretion of thyroid hormone. [10]  
b. Discuss important compounds synthesized from Cholesterol. [10]
  6. **Write short notes on:**  
a. Calcium homeostasis. [8]  
b. Metabolic function of Selenium. [6]  
c. Role of Cholesterol in atherosclerosis. [6]
-

125

**B.Sc. [ Medical (Part-III) ]**  
**BF/2008/05**

**Anatomy**

**M.M. : 100**

**Time : 3 Hours**

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

1. Describe the origin, course, relations and branches of Mandibular nerve. [20]
2. Classify various dural venous Sinuses and describe in detail Cavernous sinus. Add a note on applied anatomy of this sinus. [20]
3. **Describe briefly:** [2x10=20]
  - a. Hyoglossus muscle and its relations.
  - b. Muscular triangle.
4. **Draw and label:** [4x5=20]
  - a. Nerve supply of lateral wall of nasal cavity.
  - b. Histology of thyroid gland.
  - c. Circle of Willis.
  - d. Cerebellar nuclei.
5. **Write short notes on:** [4x5=20]
  - a. Klinefelter's syndrome.
  - b. Lateral pterygoid muscle.
  - c. Facial artery in face.
  - d. Dangerous area of face.
6. Describe in detail muscles of Pharynx. Add a note on nerve supply of Pharynx. [20]
7. **Write short notes on:** [4x5=20]
  - a. Space of Burns.
  - b. Arachnoid granulations.
  - c. Branches of basilar artery.
  - d. Sensory supply of tongue.
8. **A. Enumerate[Give names only]:** [4x3=12]
  - a. Structures passing through foramen ovale.
  - b. Groups of fibres passing through inferior Cerebellar peduncle.
  - c. Nerve supply of Scalp.
  - d. Branches of external carotid artery in Carotid triangle.

**B. Write briefly:** [2x4=8]

  - a. Radiographic anatomy.
  - b. Congenital anomalies of tongue.

-----

186

**B.Sc. [ Medical (Part-III) ]**  
**BF/2008/05**

**Physiology**

**M.M. : 100**

**Time : 3 Hours**

*Note: Attempt any FIVE questions.*

1. Describe the functions of Hypothalamus. [20]
  
  2. Enumerate the hormones secreted by anterior Pituitary gland. Describe functions of growth hormone and its clinical significance. [20]
  
  3. **Write on following:** [10+10]
    - a. Physiology of pregnancy.
    - b. Visual pathway.
  
  4. **Write actions of following:** [10+10]
    - a. Testosterone.
    - b. Vasopressin.
  
  5. **Compare and contrast the following:** [10+10]
    - a. Conduction and Neural deafness.
    - b. Cretinism and Myxoedema.
  
  6. **Write notes on following:** [4x5=20]
    - a. Referred pain.
    - b. Tetany.
    - c. Withdrawl reflex.
    - d. Oral contraceptive pills.
-

127

**B.Sc. [ Medical (Part-III) ]**  
**BF/2008/05**

**Biochemistry**

**M.M. : 100**

**Time : 3 Hours**

*Note: Attempt any FIVE questions.*

1. Describe the process of translation in Eukaryotes. Mention various posttranslational modifications. [20]
  
  2. Write briefly on: [4x5=20]
    - a. Telomerase.
    - b. PCR.
    - c. Gene therapy.
    - d. Eukaryotic promoter.
  
  3.
    - a. Describe the principles of ELISA using a flow diagram and write its applications. [10]
    - b. Describe the genetic basis of antibody diversity. [10]
  
  4.
    - a. Draw a labeled diagram of Electron transport chain and show the sites of various inhibitors. Write the mechanism of action of Uncouplers. [10]
    - b. Draw a labeled diagram of Replication fork. [10]
  
  5.
    - a. Write biochemical findings in Obstructive Jaundice. [5]
    - b. Enumerate various tests for Kidney function. [5]
    - c. Describe Type I hypersensitivity reaction. [5]
    - d. Define vaccine and enumerate different types. [5]
  
  6. Define Immunity and describe its various types. [20]
-

**B.Sc. [ Medical (Part-III) ]** 128  
**BF/2008/05**

**Psychology & Education**  
(New Scheme)

**M.M. : 80**

**Time : 3 Hours**

*Note: Attempt any FIVE questions.*

1. Describe characteristics of Adolescence. [16]
  2. What problems are faced by Indian youth in the field of education, Social life and future? [16]
  3. Aggression and Violence amongst Indian youth is a serious concern of society and nation - Explain? [16]
  4. Differentiate between Drug use and Drug abuse? Describe its causes and treatment? [16]
  5. How knowledge can be evaluated? What is its significance. [16]
  6. What is Viva-Voce examination? Describe its merits and demerits? [16]
  7. What is the importance of Internet and Websites in medical education? [16]
  8. Why Guidance and Counselling is essential to youth? [16]
-