

B.Sc.(M.L.T.) [2nd Year]

BF/2009/07

Analytical Biochemistry & Metabolism

M.M. : 100

Time : 3 Hours

Note: *Attempt all questions.*

1. Discuss digestion and absorption of Carbohydrates. [15]

2. **Discuss principle and application of:**
 - a. Atomic absorption spectroscopy. [10]
 - b. Electrometric determination of Na⁺ and K⁺. [10]

3. **Write short notes on:**
 - a. Exercise intolerance occurs in which Glycogen storage diseases. [10]
 - b. RIA. [10]

4.
 - a. Discuss lab diagnosis of diabetes of Diabetes Mellitus. [8]
 - b. Lesch Nyhan syndrome. [7]

5.
 - a. Discuss role of Vitamin C. [8]
 - b. Nitrogen balance. [7]

6.
 - a. Discuss diagnostic uses of Enzymes. [8]
 - b. Phenylketonuria. [7]

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Basic Cellular pathology & allied techniques

M.M. : 100

Time : 3 Hours

Note : Attempt all questions .Draw diagrams wherever necessary.

1. Discuss briefly the parts of Light microscope and their uses. [10]
2. Write in brief about the collection and processing of Pleural fluid sample sent to the laboratory. [10]
3. Describe the structure and functions of the Heart. [10]
4. Enumerate the different Endocrine glands and discuss histology of Thyroid gland. [10]
5. **Comment on:**
 - a. Endoplasmic reticulum. [5]
 - b. Stratified squamous epithelium. [5]
6. **Write short notes on:**
 - a. Polarizing microscope. [5]
 - b. Metachromatic dyes. [5]
7. **Discuss briefly:**
 - a. Spermatogenesis. [5]
 - b. Renal corpuscle. [5]
8. **Comment on:**
 - a. Pigments. [5]
 - b. Tongue. [5]
9. **Write short notes on:**
 - a. Elastic tissue stains. [5]
 - b. Silver impregnation techniques. [5]
10. **Discuss briefly:**
 - a. Histology of Liver. [5]
 - b. Quality control in Cytology. [5]

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Systemic Microbiology including Virology & Parasitology

M.M. : 100

Time : 3 Hours

Note: *Attempt all questions.*

1. **Describe in brief the following:**
 - a. Life cycle of *Dracunculus Medinensis*. [5]
 - b. Hydatid cyst. [5]
 - c. Cysticercosis. [5]
2. Discuss the laboratory diagnosis of Pulmonary tuberculosis. [15]
3. **Describe in brief the following:**
 - a. ASO test. [5]
 - b. Schick test. [5]
 - c. Oxidase test. [5]
4. **Write short notes on:**
 - a. Culture methods for Anaerobic bacteria. [10]
 - b. Pathogenicity of *Streptococcus pyogenes*. [10]
 - c. Classification of Atypical mycobacteria. [10]
5. **Discuss in brief the following:**
 - a. Cell culture techniques for Virus isolation. [5]
 - b. Viral Haemagglutination. [5]
 - c. Immunofluorescence tests. [5]
6. Discuss in brief the laboratory diagnosis of Filariasis. [10]

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Fundamentals of Haemtology

M.M. : 100

Time : 3 Hours

Note: *Attempt all questions.*

1. Name different blood group systems and discuss ABO system in detail. [10]
2. Methods of Cross matching. [10]
3. Transfusion reactions. [10]
4. Choice of material for Transfusion. [10]
5. Discuss synthesis and degradation of Hemoglobin. [10]
6. Estimation of Foetal Hemoglobin[HbF]. [10]
7.
 - a. Target cells. [5]
 - b. Reticulocytes. [5]
8.
 - a. LE Cells. [5]
 - b. Estimation of Fibrinogen. [5]
9. Absolute indications of Bone marrow aspiration. [10]
10. Investigations to detect defects in intrinsic pathway of Coagulation. [10]
