



Faculty of Applied Science/**Medical Analysis Department**

MEDA Master Degree acceptance **qualification exam topics** are as follows:

Course 1: Bacteriology (suggested weight is 20% of questions)

Diagnostic bacteriology of_

1. Urinary Tract Infections
2. Cerebrospinal Fluid
3. Gastrointestinal Tract
4. Blood Infection
5. Anaerobic Bacteria

Resources_

- Medical Microbiology, edited by Jawetz, Melnick, and Adelberg. 27th edition, 2022.
- Diagnostic Microbiology, edited by Bailey and Scott, 2007, 12th edition or 15th edition, 2024.

1. **Course 2: Immunology** (suggested weight is 20% of questions)
2. General overview of immunology
3. Immune host defense mechanism (innate and adaptive immunity)
4. Cells and organs of the Immune System
5. Antibody
6. Immune response to microbes

Resources_

- Basic Immunology: Functions and Disorders of the Immune System, by Abul K. Abbas

Course 3: Parasitology (suggested weight is 20% of questions)

1. Intestinal protozoal parasites: focus on *Entamoeba histolytica* and *Giardia lamblia*.
2. Tissue and blood protozoal parasites: focus on *Toxoplasma gondii*.
3. Class Cestoda: General features of the class and focus on one parasite, especially *Echinococcus granulosus*.
4. Class Trematoda: General features of the class and focus on one parasite, especially *Schistosoma heamatobium*.
5. Class Nematoda: General class features and focuses on one parasite, especially *Enterobius vermicularis*.

Resources_

- Parija SC. (2004). Textbook of Medical Parasitology.
- Roberts, LS, and Janovy, JR. (2010). Foundations of Parasitology. London.

Course 4: Virology (suggested weight is 20% of questions)

1. General properties of viruses
2. Evolutionary origin of viruses
3. Types of Symmetry of Virus Particles
4. Replication of viruses: General Steps in Viral Replication Cycles
5. Prion and human cancer viruses

Resources_

- Medical Microbiology, edited by Jawetz, Melnick, and Adelberg. 27th edition, 2022.

Course 5: Biochemistry (suggested weight is 20% of questions)

1. Carbohydrate Metabolism and Disorders
2. Lipid Metabolism and Disorders
3. Protein and Amino Acid Metabolism Disorders
4. Enzymes in Clinical Diagnosis
5. Endocrinology and Hormonal Disorders
6. Nucleic acid metabolism and its associated disorders

Resources_

- Harper's Illustrated Biochemistry Thirty-First Edition 31st Edition, by Victor W. Rodwell (Author), David Bender (Author), Kathleen M. Botham (Author), Peter J. Kennelly (Author), P. Anthony Weil (Author).
- Clinical Biochemistry and Metabolic Medicine 8th Edition, by Martin Andrew Crook (Author).