

## Mid-Term Assignment (summer-20)

Course Title: Immunology and serology

Instructor: Saima hadi

Marks: 30

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Attempt all questions .Each question carry 10 marks.

Q1. Define the following terms.

- i. Immunology
- ii. Serology
- iii. Antibody
- iv. Antigen

Q2. Differentiate between Innate and Acquired immunity?

Q3. Write a note on immunoglobulin(antibodies)?

### **Q.1 Define the following terms?**

**Ans. Immunology** is the study of the immune system and is a very important branch of the medical and biological sciences. The immune system protects us from infection through various lines of defence. If the immune system is not functioning as it should, it can result in disease, such as autoimmunity, allergy and cancer.

### **2.Serology**

**Ans.** The scientific study or diagnostic examination of blood serum, especially with regard to the response of the immune system to pathogens or introduced substances.

### 3. Antibody

Ans. An antibody, also known as an immunoglobulin, is a large, Y-shaped protein produced mainly by plasma cells that is used by the immune system to neutralize pathogens such as pathogenic bacteria and viruses.

### 4. Antigen

Ans. An antibody, also known as an immunoglobulin, is a large, Y-shaped protein produced mainly by plasma cells that is used by the immune system to neutralize pathogens such as pathogenic bacteria and viruses.

### Q2. Differentiate between Innate and Acquired immunity

**Adaptive immune** system capable of recognizing numerous microbial and non-infections substances and developing a unique specific **immune** response for each substance. Whereas, **innate immune** system can only recognize structures sheared by classes of microorganism.

**Innate immunity** refers to nonspecific defense mechanisms that come into play immediately or within hours of an antigen's appearance **in the** body. ... The **innate immune** response is activated by chemical properties of the antigen. **Adaptive immunity**. **Adaptive immunity** refers to antigen-specific **immune** response.

### Q3. Write a note on immunoglobulin(antibodies)?

Ans. **Immunoglobulins**, also known as **antibodies**, are glycoprotein molecules produced by plasma cells (white blood cells). They act as a critical part of the immune response by specifically recognizing and binding to particular antigens, such as bacteria or viruses, and aiding in their destruction. Immunoglobulin

**Antibody**, also called immunoglobulin, a protective protein produced by the immune system in response to the presence of a foreign substance, called an antigen. **Antibodies** recognize and latch onto antigens in order to remove them from the body.