**1st Mid-term exam 1437/1438 H (451 Immunology)**

**10**

**Name: Un. No:**

**Q1: Choose the correct answer in the following statement: (4 marks)**

**1- In your serum you have IgM but your friend has different IgM which are mostly due to single amino acid differences in the constant region, what type of Ig variation is this?**

A) isotype B) idiotype C) allotype D) Hyper variation

**2- Which statement is true?**

A) IgE is found on the surface of circulating B lymphocytes with IgD

B) IgM can transfer through placenta

C) IgG is a predominant antibody of primary immune response.

D) IgA has secretory component produced by epithelial cell

**3- Immediately following a break in the skin, phagocytes engulf bacteria within the wound. This is an example of an …………….. immunity which is …………… against a pathogen.**

A) Adaptive, specific B) innate, specific

C) innate, nonspecific D) adaptive, nonspecific

**4- The immunoglobulin isotype is determined by**

A) hypervariable regions of heavy and light chains. B) constant regions of light chains.

C) constant regions of heavy chains. D) the hinge region.

**Q2: Fill in the gap? (4 marks)**

5- One type of granulocytic cell is a …………………………………………………………..

6- A small molecule that is not immunogenic by itself unless it is bound to protein carrier. It is

known as …………………………………………………………………………………

7- Antigen presenting cell (APC) expresses ……………………………. which have the ability to recognise pathogen via PAMP.

8- B cells mature in the……………….…………………..….. while T cells mature in the ……………………………...…. and then both cells leave these tissues and enter the ………………………………….………………….. for proliferation and differentiation.

9- …………….…………………………is sites of intense B-cell proliferation, selection, maturation and can be found in primary and secondary lymphoid follicles.

10- ……………………………………....is overall the strength of binding between multivalent antigen and antibody.

**Answer the following questions:**

**Q3: The complement system is cascade of plasma proteins (30 proteins) that provide rapid defence against infectious agents. (2 marks)**

11- Which complement pathway is initiated by MBL?

12- What is the main components formed by all three pathways and attach to bacterial CW?

13- What is the last molecule formed on bacterial CW that makes holes and bursts bacterium?

14- Why do you think that your cells are not being affected by complement system if activated?

Best Wishes

Dr. Ayman S Mubarak