FINAL ARCHIVE

1. A 6-year-old patient presents with vascular dilatation on the whites of the eyes with B and T cells defect Which on the following is the most likely?

 Select one:

1. Ataxia telangiectasia
2. Wiscott-Aldrich syndrome (WAS)
3. Hereditary angioedema
4. Myeloperoxidase deficiency
5. C3 deficiency
6. Antibody-dependent cellular cytotoxicity (ADCC) is the process by which natural killer cells destroy infected cells, identified by what immunoglobulin on the surface?

Select one:

1. IgA
2. IgD
3. IgE
4. IgG
5. IgM
6. For which of the following tests is a lack of agglutination a positive reaction?

Select one:

1. Hemagglutination
2. Passive agglutination
3. Reverse passive agglutination
4. Agglutination inhibition
5. Latex agglutination
6. All of the following are true about immune-complex mediated type lll hypersensitivity except

Select one:

1. immune-complex can formed by serum products.
2. Tissue damage can be caused by complement activation.
3. Includes the Arthus reaction.
4. Requires cytotoxic T cells.
5. Damage caused by neutrophils and platelets
6. A child presents with recurrent infections with bacteria, fungi, and viruses. The Patient has IL-2R gamma chain mutations, which of the following does the patient nave?

Select one:

1. Ataxia telangiectasia
2. Wiscott-Aldrich syndrome (WAS)
3. Hereditary angioedema
4. Severe combined immunodeficiency disease (SCID)
5. C3 deficiency
6. Prozone is:

Select one:

1. Zone of antigen excess
2. Zone of equivalence
3. Zone of antibody excess
4. Zone of complement excess
5. Zone of RBC excess
6. Which of the following is used to enumerate and/or separate live cells that express an antigen, sorted by applying an electric charge to the stained cells?

Select one:

1. ELISA (Enzyme-linked immunosorbent assay)
2. Fluorescent antibody (fluorochromes)
3. Flowcytometer
4. Western blotting (immunoblotting)
5. single radial immune diffusion
6. what is the basic schematic for an indirect ELISA test?

Select one:

1. Antigen, Primary antibody, Secondary Antibody, Enzyme
2. Antigen, primary antibody, enzyme
3. Antibody, antigen, enzyme
4. Antibody, enzyme
5. Antibody, antigen, antibody, enzyme
6. Which of the following are secreted by macrophages after they have recognized pathogens using pattern recognition molecules (induction phase)?

Select one:

1. IL-8
2. IL-4
3. IL-7
4. IL-5
5. TNF
6. A patient in their early 20s presents with recurrent bacterial infections-History shows lymphocytes levels have decreased with age. Which of the following is the most likely?

Select one:

1. Myeloperoxidase deficiency
2. X-Iinked agammaglobulinemia
3. Wiskott-Aldrich syndrome (WAS)
4. Common variable immunodeficiency
5. chronic granulomatous disease
6. A child presents with a frequent infection of gram negative bacteria, Which of the following is the most likely?

Select one:

1. C3 deficiency
2. Hereditary angioedema
3. autoimmune disease
4. SLE
5. Selective IgA deficiency
6. Which of the following vaccines contain epitopes made by recombinant DNA technology

Select one:

1. Pneumococcal (PCV)
2. Haemophilus influenza type B
3. Hepatitis B
4. Diphtheria,
5. tetanus, pertussis
6. A deficiency in complement inhibitors could lead to which of the following?

Select one:

1. Meningitis
2. Leprosy
3. X-Iinked hyper-IgM syndrome
4. Hereditary angioedema
5. X-Iinked agammaglobulinemia
6. Which of the following is used to detect the production of cytokines inside cells.

Select one:

1. ELISA (Enzyme-linked immunosorbent assay)
2. Fluorescent antibody (fluorochromes)
3. Flow cytometer
4. Western blotting (immunoblotting)
5. single radial immunodiffusion
6. All of the following are autoimmune disorders except

Select one:

1. Graves disease
2. SCID
3. Rheumatoid arthritis
4. crohn's disease
5. SLE
6. Amount of various immunoglobulin classes can be measured by

Select one:

1. double diffusion in one dimension
2. single diffusion in radial dimension
3. single diffusion in one dimension
4. double diffusion in radial dimension
5. Double diffusion in 3 dimensions
6. Foreign antigens synthesized within body cells are presented by

 Select one:

1. Class I MHC molecules to cytotoxic T cells.
2. class II MHC molecules to helper T cells.
3. class I MHC molecules to helper T cells.
4. class II MHC molecules to CD4-bearing cells.
5. class II MHC molecules to cytotoxic T cells-
6. which of the following matches the description with the cytotoxic T cell (CTL) killing mechanism:

Select one:

1. Potent inducer of apoptosis, Perforin
2. Degrade host cell proteins and activate caspase enzyme system, Granzyme
3. Forms a pore in the target cell membrane, Fas ligand
4. Degrade host cell proteins and activate caspase enzyme system, Perforin
5. forms a pore in the target cell membrane, Granzyme
6. If antibody is uniformly distributed in a gel and antigen is added to a well cut into the gel, the process is called:

Select one:

1. single diffusion.
2. double diffusion.
3. immunofixation.
4. Retrodiffusion
5. Complement fixation
6. An example of a known oncogenic virus is:

Select one:

1. Herpes zoster
2. HIV-2
3. Epstein-Barr virus.
4. Vesicular stomatitis virus
5. Proteus mirabilis
6. Rheumatoid arthritis mostly occur in individuals carrying

Select one:

1. HLA-DR4 gene (HLA-human leucocyte antigen)
2. HLA-DR1 gene
3. HLA-DR3 gene
4. HLA-DR2 gene
5. HLA-DR5 gene
6. A woman who is Rh- has a first child with a man who is Rh+ (heterogeneous). What, if any, are the likely consequences if the woman has a second child with the same man?

 Select one:

1. No problem expected
2. The second child is at risk to develop myasthenia gravis.
3. The mother will develop hemolytic anemia.
4. The second child has at least a 50% chance of developing hemolytic anemia of the newborn.
5. The second child has 100 % chance of developing hemolytic anemia of the newborn.
6. A serological test that uses red blood cells coated with exogenous antigens to detect patient antibodies against those exogenous antigens is called:

Select one:

1. latex agglutination.
2. hemagglutination.
3. neutralization.
4. complement fixation.
5. Direct agglutination
6. Which of the following immune mechanisms is MOST important in Adverse reaction to repeated injections of horse immunoglobulins in large quantities.

Select one:

1. Delayed type hypersensitivity
2. Immune complex formation
3. Cytotoxic/cytolytic antibody reactions
4. tumor formation
5. autoimmunity
6. What is the main purpose of an indirect immunofluorescence test?

Select one:

1. Detect ANA
2. Detect viral antigen
3. Detect bacterial antigen
4. Detect level of antibodies
5. Detect level of complements
6. A defect in VDJ recombinase system would lead to:

Select one:

1. Defective antibody production with normal T cell activity
2. Severe combined immunodeficiency
3. Hyper IGM syndrome
4. Defective NK cells
5. Autoimmunity
6. Case: eczema, low platelets, infection, and malignancy:

Select one:

1. Digeorge syndrome
2. Ataxia telangiectasia
3. SCID
4. Leukocyte adhesion defect
5. Wiskott-Aldrich syndrome
6. A molecule that is expressed on tumor cells and on normal tissue from which they arise:

Select one:

1. Carcinoembryonic antigen
2. melanoma antigen
3. CD20
4. E6 and E7 proteins
5. EBNA-1 protein
6. Which of the following best describes the problem in Type I diseases?

Select one:

1. Autoimmune response that abnormally stimulates tissue function.
2. Immune deficiency disease
3. Autoimmune response that results in tissue destruction
4. type 2 Hypersensitivity reaction
5. Immune complex disease
6. When carrier particles are coated with an antigen that is not normally found on them,this is known as:

Select one:

1. direct agglutination.
2. passive agglutination.
3. reverse passive agglutination.
4. agglutination inhibition reaction.
5. complement fixation.
6. In T cell leukemia, a vaccine against which of the following might prove useful:

Select one:

1. Epstein-Barr virus
2. Marek's disease virus
3. Human HTLV-1
4. papilloma virus
5. varicella zoster virus.
6. what is serum in a blood sample?

Select one:

1. Fluid part of blood with fibrinogen
2. Fluid part of blood without fibrinogen
3. Fluid part of blood With RBC
4. Fluid pan of blood With metabolites
5. Fluid part of blood with radicals
6. A patient had a marrow transplant. After 2 to 3 days , he developed diarrhea and symptoms related to the skin and liver . What type of reaction is this?

Select one:

1. graft versus host disease
2. immune suppression
3. hemolysis
4. hypersensitivity reaction
5. allergy
6. The inappropriate response of immune system towards a relatively harmless foreign antigen causing harm to the host is referred as

Select one:

1. Hypersensitivity
2. auto-immune diseases
3. immunodeficiency
4. tolerance
5. immune surveillance
6. Someone deficient in MHC class I expression in the thymus would also expected to be deficient in which of the following?

Select one:

1. CD4+T cell development.
2. CD8+T cell development.
3. B cell responses.
4. gamma delta T cell development.
5. Antibodies
6. Which of the following molecules secreted by Mast cells are lipid metabolites and increase vascular permeability?

Select one:

1. Histamine.
2. heparin.
3. Leukotrienes.
4. Tryptase
5. Proteoglycans
6. Promotes lgE synthesis

Select one:

1. IL-4
2. IL-10
3. Interferon-gamma
4. IL-2
5. Tumor necrosis factor beta
6. CTLA-4 gene mutation leads to

Select one:

1. Hypersensitivity
2. auto-immune diseases
3. immunodeficiency
4. tolerance
5. immune surveillance
6. Which of the following cytokines is associated with inducing fever?

Select one:

1. IL-1
2. IL-2
3. IL-5
4. IL-10
5. IL-5
6. Affinity maturation of an antibody involves which of the following molecular events?

Select one:

1. Recognition of recombination Signal sequences by the RAG recombinase.
2. Deamination of cytosines by activation induced deaminase(AlD).
3. Hyper-mutation of the framework regions.
4. Switching from making lambda light chains to kappa light chains.
5. switching between antibodies subclasses
6. All of the following are typical granulomatous reaction EXCEPT:

Select one:

1. Reaction to persistent antigens
2. Presence of CD4+ T lymphocytes
3. Multinucleate giant cells
4. Epithelioid cells
5. Large numbers of plasma cells
6. A patient presents tor a follow-up visit after a diagnosis of systemic lupus erythematosus (SLE). Which of the following is the most likely?

Select one:

1. C4 gene mutation
2. C5-C9 deficiency
3. Early neutrophils deficiency
4. Hyper IgM syndrome (HIM)
5. Selective IgA deficiency
6. Which of the following is only used in the classical complement pathway?

Select one:

1. C1
2. C5
3. C7
4. C9
5. C3
6. Organ transplantation performed between two twin brothers is called:

Select one:

1. Isograft
2. Xenograft
3. Autograft
4. Allograft
5. Fetograft
6. Which ELISA test is used to detect anti-HIV in a patients serum?

Select one:

1. Direct
2. Indirect
3. Sandwich
4. Stable
5. Unstable
6. Anti-idiotype vaccine:

Select one:

1. Passive therapy
2. active immunity
3. live attenuated vaccine
4. inactivated vaccine
5. DNA vaccine
6. In HCG latex agglutination test

Select one:

1. The antigen (HCG) is a natural particle
2. Antigen (HCG) molecules are artificially bound to particles.
3. Antibody (anti-HCG) is attached to particles.
4. The antigen-antibody reaction is competitive (no agglutination indicates a positive result).
5. Direct agglutination
6. Hashimoto's thyroiditis has a genetic association With the HLA allele DR5. TO which major histocompatibility class does this allele belong?

Select one.

1. Class I
2. Class II
3. Class III
4. Class IV
5. Class 5
6. Which cell produces IL-12?

Select one:

1. Macrophages
2. Eosinophil
3. Neutrophil
4. Mast cell
5. B Cell
6. Which of the following diseases occurs with the absence of a thymus?

Select one:

1. Severe combined immunodeficiency disease (SCID)
2. Chronic granulomatous disease (CGD)
3. Bare lymphocyte syndrome (BLS)
4. Wiskott Aldrich syndrome (WAS
5. Digeorge syndrome
6. Which of the following is used to separate proteins in patients blood?

Select one:

1. (Enzyme-linked immunosorbent assay)
2. Fluorescent antibody (fluorochromes)
3. FACS (fluorescence-activated cell sorting)
4. Flwocytometer
5. Electrophoresis
6. Which of the following is NOT true about live vaccines?

Select one:

1. They activate both humoral and cell mediated immunity
2. They activate just cell mediated immunity
3. They are better against viruses
4. better than killed vaccine
5. can be freezed
6. What is the pattern of staining on a renal biopsy for Goodpasture Syndrome?

Select one:

1. Linear
2. Globular
3. Zigzag
4. Granular
5. Circular
6. All of the following are true about delayed-type hypersensitivity Except

Select one:

1. is mediated by T lymphocytes.
2. includes contact sensitivity
3. includes the tuberculin reaction.
4. includes penicillin allergy
5. includes granuloma formation
6. Activate immune action against worms

Select one:

1. IL-5
2. IL-10
3. Interferon-gamma
4. IL-2
5. Tumor necrosis factor beta
6. Anti- fever Aspirin inhibits

Select one:

1. IL-1 and TNF
2. IL-2 and TNF
3. IL-8 and IL-1
4. T cells
5. B Cells
6. In which stage of T cell development commitment to gamma delta lineage occurs:

Select one:

1. Double positive
2. Double negative stage
3. Single positive
4. Pre-T cell
5. Mature T cell
6. Hemolytic disease of the newborn due to RhD incompatibility depends the. \_

Select one:

1. trans placental passage of anti-RhD IgG antibodies.
2. trans placental passage of anti-RhD IgM antibodies
3. production of cytotoxic antibodies by the baby
4. The first pregnancy of tne RhD+mother with RhD-fetus.
5. Transplacental passage of anti-RhD IgA antibodies
6. The direct Coombs' test is designed to detect when people have a disease that causes them to

Select one:

1. have an excessively high fever.
2. quit making antibodies.
3. make too many red blood cells.
4. produce antibodies that bind to their own red blood cells
5. have tumor markers
6. In MS, we have CD4+ involvement; which one is expected:

Select one:

1. IL-2, IL-4, IF-gamma
2. TGF-B
3. TNF alpha
4. IL-4, IL-5
5. IL-10
6. A transfusion reaction due to being given the wrong blood type is which of the following types of hypersensitivity reactions?

Select one:

1. Type I hypersensitivity.
2. Type II hypersensitivity.
3. Type II hypersensitivity.
4. Type IV hypersensitivity.
5. Type 5 hypersensitivity.
6. Serum from an AB, Rh negative patient mixed with red blood cells from a patient with\_\_\_\_\_\_\_\_ and result in \_\_\_\_\_\_\_\_\_ ?

Select one:

1. Type A, no agglutination
2. Type B, agglutination
3. Type O, agglutination
4. Type AB, agglutination
5. Type A, agglutination
6. Cytokines produced by TH1 are \_\_\_\_\_\_\_\_ and cytokines produced by TH2 are \_\_\_\_\_\_\_\_\_

Select one:

1. IFN-gamma and tumor necrosis factor, IL-4 and IL-5
2. IL-4 and IL-5; IFN-gamma and tumor necrosis factor
3. IFN-gamma and IL-4; Tumor necrosis factor and IL-5
4. Tumor necrosis factor and IL-5; IFN-gamma and IL-4
5. IFN-gamma and IL-5; Tumor necrosis factor and IL-4
6. Which of the following are type 3 and 4 hypersensitivity reaction?

Select one:

1. hashimoto thyroiditis
2. rheumatoid arthritis
3. systemic lupus
4. type 1 diabetes
5. Acute transplant rejection
6. Low IgG and IgA, high IgM [Hyper-IgM syndrome]:

Select one:

1. CD40 ligand mutation
2. MHC1 gene mutation
3. FasL mutation
4. Fas mutation
5. MHC2 gene mutation
6. Which of the following is used in typing of micro-organisms as pneumococci

Select one:

1. Hemagglutination
2. Passive agglutination
3. Reverse passive agglutination
4. Direct Agglutination
5. Latex agglutination
6. The proliferation, is caused by acritical signal (along with TCR signal transduction) from \_\_\_\_\_\_\_\_\_\_ on the B cell and \_\_\_\_\_\_\_\_ on T cell

Select one:

1. CD40L; CD40
2. CD2; 87
3. CD40; CD40L
4. CD80; CD28
5. CD3; CD4
6. DNA is detected by:

Select one:

1. Southern blot
2. western blot
3. Eastern blot
4. Rapid blot
5. Northern blot
6. All of the following complement proteins and cells participate in the clearance of immune complexes EXCEPT:

Select one:

1. C3b
2. CR1
3. CR2
4. Red blood cells
5. Liver macrophages (Kupffer cells)
6. In Di George syndrome, the most affected part of the lymph node is:

Select one:

1. Cortex
2. Follicle
3. Capsule
4. Paracortex
5. Medulla
6. Case: a patient with various lung symptoms and has anti-glomeruli basement membrane antibodies:

Select one:

1. Graves disease
2. pemphigus disease
3. Rheumatoid arthritis
4. Goodpasture syndrome
5. chronic granulomatous disease
6. Which of the following autoimmune diseases triggered by UV light

Select on:

1. hashimoto thyroiditis
2. rheumatoid arthritis
3. systemic lupus
4. ankylosing spondylitis
5. Addison's disease
6. In transplantation, a recipient antibody cross-match to donor RBC is performed to avoid:

Select one:

1. Chronic rejection
2. Hyperacute rejection
3. Acute rejection
4. Viral infection
5. Secondary rejection
6. IFN-gamma stimulates \_\_\_\_\_\_\_\_ immunity by enhancing\_\_\_\_\_\_\_\_ cells and firstly induce T cells a. IL-4/lL-5 stimulate \_\_\_\_\_\_\_\_\_ immunity (antibodies) by activating B cells and firstly induce \_\_\_\_\_\_\_\_\_\_ production

Select one:

1. Cell-mediated; CD8+; Humoral; lgD
2. Cell-mediated; CD4+; Humoral; lgE
3. Cell-mediated; CD8+; Humoral; IgM
4. Cell-mediated; CD4+; Humoral; IgM
5. Humoral; CD8+; Cell-mediated; lgE
6. The ouchterlony method of immunodiffusion analysis: which one is true

Select one:

1. Is used to detect one antigen
2. Can directly compare the antigenic relatedness of two antigens
3. Is a standard quantitative assay
4. Requires use of radioactive antibodies
5. Measures only autoantibodies
6. Which of the following is live vaccines

Select one:

1. polio (given by injection),
2. Hep. A
3. rabies viruses.
4. Pertussis
5. TB
6. A patient presents With TH and Tc cells are unable to develop. Which of the following is the most likely?

Select one:

1. Leukocyte adhesion deficiency (LAD)
2. Chediak-Higashi disorder
3. Bare lymphocyte syndrome (BLS)
4. Wiskott-Aldrich syndrome (WAS)
5. Chronic granulomatous disease (CGD)
6. Global T cell growth Factor

Select one:

1. IL-4
2. IL-10
3. Interferon-gamma
4. IL-2
5. Tumor necrosis factor beta
6. In rheumatoid factor latex agglutination test

Select one:

1. The antigen (rheumatoid factor) is a natural particle
2. Antigen (rheumatoid factor) molecules are artificially bound to particles.
3. Antibody (anti-rheumatoid factor)is attached to particles.
4. The antigen-antibody reaction is competitive (no agglutination indicates a positive result).
5. It is Direct agglutination
6. Toxic shock syndrome in superantigen effect is mediated by cytokines secreted from \_\_\_\_\_\_\_\_\_ cells

Select one:

1. B
2. T
3. Mast cells
4. Neutrophils
5. DCs

81)in CRP latex agglutination test

Select one

a we test the presence of CRP in patient

b. we test the presence of anti-CRP in palient

c it is direct agglutination

d the antigen (CRP) is fixed on latex

e The antigen (CRP is a natural particle

82) Wasserman teaction is:

Select one

a Tube flocculation test

b Complement fixation

c Slide agglutination test

d Immunoassay

e Precipitation teaction

83) If adenosine deaminase deficiency occurs, which of the following is true?

Select one:

a. T cells will be absent but B and NK celis will be present

b. T and B cells will be absent but NK cells

will be present

C.Bcells will be absent but T and NK cells will be present

d.Band NK cells will be present but T cells will be absent

e. B, T, and NK cells will be absent

84) Granzyme is all except

Select one:

a. Produced by CD8 Cells

b. Produced by NK cells

c. Used by CD8 cells to kill pathogen directly

d. Used by CD8 cells to kil infected cell directly

e. Activate apoptosis inside the target

85) A54 year old male developed a brain tumor which was diagnosed as an astrocytoma Immunohistochemical stans showed positive

IDH staining implying a mutation in IDH, Through which of the following mechanisms this mutation resuted in cancer?

Select one

 a. increased micro RNAS

b.oncogene amplitication.

c tumor suppressor gene downregulation.

d epigenetic change

e. Impairing DNA repair mechaniss

86) Which of the following diseases affect neutrophils?

Select one:

a. Severe combined immunodeficiency disease (SCID)

b Chronic granulomatous disease (CGD)

c Bare lymphocyte syndrome (BLS(

d Wiskott Aldrich syndrome (WAS)

e DiGeorge's syndrome

87) Which of the folowing s used to ldentify autoantibodies as ANA?

Select one

A ELISA (Enzyne inked immunosotbent assay)

b fluorescent nicroscope

c confocal microscope

d Western blotting (mnunobiotting)

e flow cytometer

89) Serum from an A, Rh negative patient mixed with red blood cells from a patient with.. and results in ..?

Type A, no agglutination

 Type B, no agglutination

Type Q, agglutination

Type AB, no agglutination

Type A, agglutination

90) Superantigens such as staphylococcal enterotoxins bind to certain TCR chains and

to molecules Select one:

 a. Alpha, MHC 1

 b. Beta, MHC2

c Delta MHC1 OF

d. Gamma MHC1

e. Alpha, MHC

91) The immune technique in TAPH test for syphil is Select one

 a uchterlony double diftusion

b. Radial immunodiftusion

 c Passive heamagglutination

 d passive coaggutation

 e Direct Comb's test

92) Polio vaccines given by injection are examples of Select one

 a Killed vaCcines

B Live attenuated vaccine O

 c Supunit vaccine O

d Anti-idiotype vaccine

e Toxoids

93) Used for detecting antibodies in recipient against donor HLA: Select one:

  a. lymphocytotoxicity assay

 b. HLA matching

C. Mixed lymphocyte reaction

d. Panel reactive antibody

 e. Blood grouping

94)Antigen-antibody precipitation is maximally seen in which of the following? Select one:

a. Excess of antibody

 b. Excess of antigen

C. Equivalence of antibody and antigen

d. Antigen-Hapten interaction

e. excess of both antigen and antibody

95) Which of the foliowing is not ilve vaccines Select one

: a oral Polovirus

 b. Measles mumpis, rubella (MMRI

c. hepatitis A

d. TB

 e. Influenza INM injection

96) Which virus infection is associated with Burkitt's lymphoma? Select one:

 a. EBV

b. Human papilloma virus

 C. Hepatitis B

d. Herpesvirus

e HTLV-1

 97) Where does affinity maturation occur? Select one:

a. Paracortex of lymphoid tissue

 b. Cortex of lymphoid tissue

 C. Germinal center of lymphoid tissue

 d. Follicular dendritic cells

e. Plasma cells

98) What is plasma in a blood sample? Select

one:

a. Fluid part of blood with fibrinogen

 b. Fluid part of blood without fibrinogen

 c. Fluid part of blood with RBC

 d. Fluid part of blood with metabolites

 e. Fluid part of blood with radicals

99) A patient presents with complaints of dark urine in the morning that clears up partially during the day. Lab work reveals hemolytic anemia, Which of the following is the most likely? Select one:

a. Transient hypogammaglobulinemia of infancy

b. Wiscott-Aldrich syndrome (WAS)

c. Selective IgA deficiency

  d. Paroxysmal nocturnal hemoglobinuria (PNH)

 e. Chediak-Higashi disorder

100) Anti-CD20 used Select one:

 a. in Hypersensitivity reaction

b. in Autoimmunity

C. in Immune deficiency

d. to Activate B cell

 e. to Activate T cell

101) Which combinations of cytokines most influence whether at CD4+ T cell becomes a TH1 or TH2? Select one:

 a. IL-4 and IL-5.

b. IL-8 and IFN-gamma.

 C. IL-4 and IL-12.

d. IL-17 and IFN-beta

e. IL-2 and IL-5

102)An infant presents with recurrent bacterial infections and partial albinism. Which of the following is the most likely? Select one:

a Chediak-Higashi disorder

b. Chronic granulomatous disease (CGD)

 c. Bare lymphocyte syndrome (BLS)

d. Myeloperoxidase deficiency

e DIGeorge's syndrome

103) Regarding Cytokines, which of the following is true Select one

a Are large, high molecular weight proteins

b. Are produced only by lymphocytes and macrophages

c can act on just one cell type

 d Each have distinctive biological activities that do not overfap with those of other cytokines.

 e Can act in an endocrines pracnine, or autocrine fashion

104) Which virus infection is associated with Burkitt's lymphoma? Select one:

A. EBV

b, Human papilloma virus

c. Hepatitis B

d. Herpesvirus

 e. HTLV-1

105)If an Ouchterony immunodiffusion pattern shows an arc equidistant between antigens A and B,this indicates that the antigens Select one

A. are identical.

b, are entirely different.

C. share a common epitope, with A being a more complex antigen.

d. share a common epitope, with B being a more complex antigen.

E.Partial identical

106) Each of the following represent pairs of molecules (the first from the antigen presenting cell and the other from the T cell) that interact during antigen presentation EXCEPT Select one:

A.  DC-SIGN and ICAM-3

b. CD26 and B7

C ICAM-1 and LFA-1

d. Class II MHC and CD4

e CD40 and CD40L

107) The RAST measures: Select one:

a. Antigen concentration.

b. IgE antibodies.

 C. IgM antibodies.

 d. Agglutination.

e. IgG antibodies

108) During infection one of the primary functions of IL-10 is to do what? Select one:

a. Increase IL-12 production

b. Attract B cells.

C. inactivate CD8 cells

d. Inhibit protein synthesis in local cells

e. Attract neutrophils

109) in B cell development each B cell will only have one specificity. The underlying mechanism is. Select one

 a somatic hypermutalion

b class switching

 c. affinity maturation

 d allelic exclusion

 e receptor editing

110)       thrombotic thrombocytopenic purpura is an example of which type of hypersensitivny reaction?

Select one:

a)         Type I

b)         Type II

c)         Type III

d)         Type IV

e)         Type 5

111)   Tuberculosis

Select one:

a)         Delayed type hypersensitivity

b)         Immune complex formation

c)     Cytotoxic/cytolytic antibody reactions

d)         Anaphylactic reactions

e)         Autoimmunity

112)       Which of the following tumor antigens is viral protein?

Select one:

a)     Carcinoembryonic antigen

b)         CD20

c)         CD10

d)         E6 and E7 proteins

e)         alpha feto-protein

113)   What is plasma in a blood sample?

Select one:

a)         Fluid part of blood with fibrinogen

b)         Fluid part of without fibrinogen

c)         Fluid part of with RBC

d)         Fluid part of blood with metabolites

e)         Fluid part of blood with radicals

114) Autosomal recessive SCID can occur due to

Select one:

a)         the absence of an enzyme adenosine deaminase

b)         Defective pre-TCR/TCR signaling

c)         Defective signaling through the common gamma-chain-dependent cytokine receptors IL-7

d)         Detective signaling through the common alpha-chain-dependent cytokine receptors IL-7

e)         the absence of an enzyme thymidine deaminase

115)     In delayed type hypersensitivity: which one is true

Select one:

a)         Release of interferon gamma and other factors leads to macrophage activation

b)         CD4+ Th2 cells are principal lymphocytes involved

c)         The reaction is maximal 2 to 6 hours after first antigen exposure

d)         involve antibodies in the reaction

e)         High reactivity in a mixed leukocyte culture would provide evidence that the transplant donor and recipient are good match

116) Expression of I-selectin is \_\_\_\_\_\_\_\_\_ for naïve T cells, and \_\_\_\_\_\_\_\_ for effector T cells.

Select one:

a)         High; Low

b)         Low; High

c)         Variable; High

d)         Variable; Low

e)         High; Variable

117) DiGeorge Syndrome is associated with:

Select one:

a)         A low risk of infections and auto-immune disorders.

b)         An absence of B cells, normal T cell function.

c)         deletion defect in chromosome 22.

d)         Normal serum calcium and normal

parathyroid

e)         A large thymus

118) Which of the following uses ultraviolet light for examining specimens ?

Select one:

a)         ELISA

b)         Western blot

c)         Fluorescent microscope

d)         Western blotting (immunoblotting)

e)         Flow cytometer

119) Case-. pain in the hand and the wrist + ESR (high) + CRP (high) + Rheumatic factor; what's the antibody involved in the pathogenesis of the disease?

select one:

a)         anti-nuclear antigen

b)         IgM anti-lgG

c)         IGM anti IGE

d)         IGM anti IGD

e)         Anti-stryptolysin

120)     immunodeficiency case with absence of T and B cells and presence of NK , the case is

Select one:

a)         ADA (adenosine deaminase) or PNP (purine nucleoside phosphorylase) deficiency

b)         defective signaling through the common g-chain-dependent cytokine

c)         Defective V(D)V recombination

d)         Defective pre-TCR/TCR

e)         Reticular dysgenesis (most severe)

121) A young child presents with severe periodontitis; History reveals recurrent pyogenic infections. Which of the following is the most likely?

Select one:

a)         C3 deficiency

b)         Leukocyte adhesion deficiency (LAO)

c)         Wiscott-Aldrich syndrome (WAS)

d)         Hyper IgM syndrome (HIM)

e)         Selective IgA deficiency

122) The immune response to lepromatous leprosy is skewed toward the production of which cytokines:

Select one:

a)         IL-2 and TNF-alpha

b)         IL-4 and IL-10

c)         IL-6 and IL-12

d)         IL-2 and IFN-gamma

e)         IL-5 and TNF

123)A mutation in the genes encoding the enzyme Bruton’s tyrosine kinase (Btk) would lead to which of the following

Select one:

a)         Human immuno-deficiency virus (HIV) infection

b)         Acquired immune deficiency syndrome (AIDS)

c)         Severe combined immunodeficiency (SCIO) syndrome

d)         Systemic inflammatory response syndrome (SIRS, sepsis)

e)         X-Iinked agammaglobulinemia

124) Cytokine interleukin-7 is a hematopoietic growth factor capable of stimulating the proliferation of lymphoid \_\_\_\_\_\_\_\_\_\_. It \_\_\_\_\_\_\_\_\_\_ affected by X-linked

SCID.

Select one:

a)           Hematopoietic stem cells (HSCs); Is

b)         Progenitor (precursor) cells (Pro- B and Pro- t cells); Is

c)         Mature cells; Is

d)           Hematopoietic stem cells (HSCs); Is not

e)         Progenitor (precursor) cells; Is not

125) All the following are agglutination reactions except

Select one:

a)         Widal test

b)         Brucella test

c)         Wasserman reaction

d)         Indirect coomb's

e)         Direct Coomb's

126) Lysis of sheep red blood cells indicates

Select one:

a)         the patient has the antibody being tested for

b)         presence of antigen in patient

c)         presence of clotting factors in patient

d)         presence of complement proteins in the patient

e)         the patient don not has the antibody(negative)

127) In agglutination reactions, the antigen is a \_\_\_\_\_\_\_\_\_ and in precipitation reactions, the antigen is a \_\_\_\_\_\_\_\_\_\_

Select one:

a)         Bound to cell/soluble molecule

b)         Soluble molecule/bound to cell

c)         Bacterium/virus

d) Protein/carbohydrate

e)         Virus/bacterium

128 Regarding Cytokines, which of the following is true

Select one:

a)         Are large, high molecular weight proteins

b)         Are produced only by lymphocytes and macrophages

c)         can act on just one cell type

d)         Each have distinctive biological activities that do not overlap with those of other cytokines

e)         Can act in an endocrines. paracrine, Or autocrine fashion

129) Where in the thymus Would you most likely find Single positive T cells?

Select One:

a)         Cortical region

b)         Medullary region

c)         Germinal center

d)         Corpuscle

e)         Follicle

130)Tolerance is induced by:

Select one:

a)         Loss of fas expression

b)         Loss of fasL expression

c)         AIRE gene mutation

d)         C4 gene mutation

e)         Soluble CTLA-4

131)Person had a rare pan-T-cell deficiency. In the flowcytometer machine, which cell marker will be the least in number?

a. CD8

b. CD4

C. CD3

d. CD10

 e.CD20

132)Each of the following represent pairs of molecules (the first from the antigen presenting cell and the other from the T cell) that interact during antigen presentation EXCEPT :

 a DC-SIGN and ICAM-3

 b CD28 and 87

 c ICAM -1 and LFA-1

d. Class I| MHC and CD4

 e. CD40 and CD40L

133)All the following are agglutination reactions except :

a. Widal test

b. Brucella test

C. Wasserman reaction

d. Indirect coomb's

e. Direct Coomb's

134)Which association is false:

a. TH2 cell and IL-6

b. TH1 Cell and IL-10

c. TH1 cell and IFN gamma

L d. DC and IL-12

e.TH2 and IL-4

135)Which of the following immune mechanisms is MOST important in Graves disease :

a. Delayed type hypersensitivity

b. Immune complex formation

 C. Cytotoxic T cell reactions

 d. inactivation due to antibody binding

e. long activation due to antibody binding

136)Which one of the following autoimmune diseases is not a type iv hypersensitivity:

a. Type 1 diabetes

b. Hashimoto thyroiditis

C. Multiple Sclerosis, Systemic Lupus Erythematosis

e. Rheumatoid arthritis

137)The affinity of an antibody can be determined by:

a. ELISA (Enzyme-linked immunosorbent assay)

b. Fluorescent antibody (nuorochromes)

C. FACS (fluorescence-activated cell sorting)

d. Westerm blotting (immunoblotting)

e.surface plasmon resonance

138)A 20 year old woman develops a red rash over her nose and cheeks after bnef sun exposure A Screening test indicates that she has an autoimmune disease. Which of the following antibodies is MOST LIKELY to be present:

a. Anti-centromere

b. Anti-basement membrane III

C. Anti-igG

 d. Anti-HLA DR4

e. Anti-HLA DR3

139)Transplantation between individuals of same species:

1. Xenogenic
2. Autogenic
3. Isogenic
4. Allogenic
5. fetogenic

140)The immune response to lepromatous leprosy is skewed toward the production of which cytokines:

1. IL-2 and TNE alpha
2. IL-4 and IL-10
3. IL-S and IL 12
4. IL-2 and IFN gamma
5. IL-5 and TNF

 141)During infection one of the primary functions of IL-10 is to do what:

1. Increase IL-12 production
2. Attract B cells
3. inactivate CD8 cells
4. Inhibit protein synthesis in local cells
5. Attract neutrophils

141)Corticosteroids blocks:

1. IL-2
2. IL-4
3. IL-5
4. IL-7
5. TNF

142)Autosomal recessive SCID can occur due to:

1. Defective signaling through the common gamma-chain-dependent cytokine receptors IL-7
2. the absence of an enzyme adenosine deaminase
3. Defective signaling through the common alpha-chain-dependent cytokine receptors IL-7
4. Defective pre-TCR/TCR signaling
5. The absence of an enzyme thymidine deaminase

143)Wasserman reaction is:

1. Tube flocculation test
2. Complement fixation
3. Slide agglutination test
4. Immunoassay
5. Precipitation reaction

144)A young child presents with severe periodontitis. History reveals recurrent pyogenic infections Which of the following is the most likely:

1. C3 deficiency
2. Leukocyte adhesion deficiency (LAD)
3. Wiscott-Aldrich syndrome (WAS)
4. Hyper IgM syndrome (HIM)
5. Selective IgA deficiency

145)Where in the thymus would you most likely find single positive T cell5:

1. Cortical region
2. Medullary region.
3. Germinal center
4. corpuscle.
5. Follicle

146)Granzyme is all except :

1. Produced by CD8 Cells
2. Produced by NK cells
3. Used by CD8 cells to kill pathogen directly
4. Used by CD8 cells to kill infected cell directly

5.Activate apoptosis inside the target

147)The RAST measures :

1. Antigen concentration.
2. IgE antibodies.
3. lgM antibodies.
4. Agglutination
5. IgG antibodies

148)Which of the following is used to identify the detailed structure of the cell or tissue :

1. ELISA (Enzyme-linked immunosorbent assay)
2. Fluorescent microscope
3. confocal microscope
4. Western blotting (immunoblotting)
5. flow cytometer

149)Antibody titer refers to the:

1. Absolute amount of specific antibody
2. Attinity of specific antibody
3. Avidity of specific antibody
4. Concentration of specific antigen
5. Highest dilution of antibody still able to give a positive result in a test system.

150)Used for detecting antibodies in recipient against donor HLA :

1. lymphocytotoxicity assay
2. HLA matching
3. Mixed lymphocyte reaction
4. Panel reactive antibody
5. Blood grouping

151)Case Pain in the hand and the wrist + ESR (high) + CRP (high) + Rheumatic factor, what's the antibody involved in the pathogenesis of the disease:

1. anti nuclear antigen
2. IgM anti-lgG
3. IGM anti IGE
4. IGM anti IGD
5. Anti-stryptolysin o

152)Which of the following is used to identify autoantibodies as ANA :

1. ELISA (Enzyme-linked immunosorbent assay)
2. Fluorescent microscope
3. confocal microscope
4. Western blotting (immunoblotting)
5. flow cytometer

153)\*Which of the following statements is FALSE regarding Human immunodeficiency Virus (HIV) infection:

1. The chemokine receptors CCR5 and CXCR4 enhance the binding and internalization of HIV by host cells
2. Gp120 is the principle viral receptor involved in the binding of HIV to host cells
3. Gp41 is involved in the internalization of HIV
4. in latently infected cells the viral genome persists for months to years
5. the host produce antibodies against the virus directly after infection

154)The immune technique in TAPH test for syphilis:

1. Ouchterlony double diffusion
2. Radial immunodiffusion
3. Passive heamagglutination
4. passive coagulation
5. Direct Coomb's test

155)Polio vaccines given by injection are examples of:

1. Killed vaccines
2. Live attenuated vaccine
3. Subunit vaccine
4. Ant-idiotype vaccine
5. Toxoid

156)Which virus infection is associated with Burkitt's lymphoma:

* 1. EBV
	2. Human papilloma virus
	3. Hepatitis B
	4. Herpesvirus
	5. HTLV-1

157)\* If an Ouchterony immunodiffusion pattern shows an arc equidistant between antigens A and B, this indicates that the antigens :

1. are identical.
2. are entirely different
3. share a common epitope, with A being a more complex antigen.
4. share a common epitope, with B being a more complex antigen.
5. Partial identical

158)A patient presents with complaints of dark urine in the morning that clears up partially during the day. Lab work reveals hemolytic anemia, Which of the following is the most likely:

1. Transient hypogammaglobulinemia of infancy
2. Wiscott-Aldrich syndrome (WAS)
3. Selective IgA deficiency
4. Paroxysmal nocturnal hemoglobinuria (PNH)
5. Chediak-Higashi disorder

159) in CRP latex agglutination test :

a. we test the presence of CRP in patient

 b. we test the presence of anti-CRP in patient

 c. It is direct agglutination

 d. the antigen (CRP) is fixed on latex

e. The antigen (CRP)Is a natural particle

160)Which combinations of cytokines most influence whether at CD4+ T cell becomes a TH1 or TH2:

a. IL-4 and IL-5

b. IL-8 and IFN-gamma.

C. IL-4 and IL-12.

d. IL-17 and IFN-beta

 e. IL-2 and IL-5

161)\*An infant presents with recurrent bacterial infections and partial albinism. Which of the following is the most likely:

a. Chediak-Higashi disorder

b. Chronic granulomatous disease (CGD)

 c. Bare lymphocyte syndrome (BLS)

d. Myeloperoxidase deficiency

e. DIGeorge's syndrome

162)Tuberculosis :

a. Delayed type hypersensitivity

b. Immune complex formation

 C. Cytotoxicicytolytic antibody reactions

 d. Anaphylactic reactions

e. autoimmunity

163)Which of the following is NOT true regarding type 1 interferon:

 a.Interferon prevents infection spreading from cell to cell

 b. NK cells are activated by Interferon and lyse infected cells

C. CD8 cells are inactivated

d. Interferon is attacking viral proteins

 e. Stimulate the expression of IL-12

164)immunodeficiency case with absence of T and B cells and presence of NK, the cause is:

 a. ADA (adenosine deaminase) or PNP (purine nucleoside phosphorylase) deficiency

b. Defective signaling through the common g-chain-dependent cytokine receptors

C. Defective V(D)J recombination

d. Defective pre-TCR/TCR signaling

e. Reticular dysgenesis (most severe)

165)Mast cell lipid metabolites stimulate\_\_\_\_\_\_ and increase \_\_\_\_\_\_of smooth muscle in the gut and bronchi:

a Vasoconstriction, Constriction

b. Vasoconstriction, stability

c. Vasodilation, Dilation

d. Vasodilation, stability

e. Vasodilation, Constriction

166)Serum from an A, Rh negative patient mixed with red blood cells from a patient with \_\_\_ and results in\_\_\_\_:

a. Type A, no agglutination

 b. Type B, no agglutination

C. Type O, agglutination

d. Type AB, no agglutination

e. Type A, agglutination

167)DiGeorge Syndrome is associated with:

 a. A low risk of infections and auto-immune disorders

b. An absence of B cells, normal T cell function

 c. deletion defect in chromosome 22

 d. Normal serum calcium and normal parathyroid

 e. A large thymus.

168)Interleukin-4 is associated with which of the following characteristics:

 a. AT cell growth factor

b. AB cell growth factor.

 C. Activation of macrophages.

d. Suppressing TH2 responses.

 e. Activation of Th1 cells

169)\*Which of the following is not live vaccines:

 a. oral Poliovirus

 b. Measles, mumps, rubella (MMR)

C. hepatitis A

 d. TB

 e. Influenza IM Injection

170)Regulatory T cells are all except :

* 1. Are induced by IL-2 and TGF beta
	2. consume complement
	3. . Are only CD4
	4. secreted TGF beta and IL-10
	5. secret Granzyme B

171)\*tolerance is induced by :

* 1. loss of fas expression.
	2. loss of fasL expression
	3. AIRE gene mutation
	4. C4 gene mutation
	5. soluble CTLA-4

172)\*Vaccines is considered \_\_\_\_\_\_\_ immunotherapy and leads to the development of \_\_\_\_\_\_\_ for a long time :

a. Active, immunologic memory

b. Active, activated B cells

C. Passive, Activated T cells

d. Passive, immunologic memory

e. Active, Activated Dcs

173) A mutation in the genes encoding the enzyme Bruton's tyrosine kinase (Btk) would lead to which of the following :

a. Human immuno-deficiency virus (HIV) Infection

b. Acquired immune deficiency syndrome (AIDS)

 C. Severe combined immunodeficiency (SCID) syndrome

 d. Systemic inflammatory response syndrome (SIRS. sepsis)

e. X-linked agammaglobulinemia

174)\*Which of the following cytokines is recruiting neutrophils and macrophages to site of infection and induce inflammation: a.Interleukin-2

 b. Interleukin-5

 c. Interleukin-10.

d. Interteukin-17.

e. IL-7

\*175)A woman who is Rh+ has a first child with a man who is Rh- What, if any, are the likely consequences if the woman has a second child with the same man:

a. No problem expected

 b. The second child is at risk to develop myasthenia gravis.

C. The mother will develop hemolytic anemia.

 d. The second child has at least a 50% chance of developing hemolytic anemia of the new born.

e. The second child has 100 % chance of developing hemolytic anemia of the new born.

176)Cytokine interteukin-7 (IL-7) is a hematopoietic growth factor capable of stimulating the proliferation of lymphoid\_\_\_\_\_\_. It\_\_\_\_\_\_ affected by X-linked SCID:

a. Hematopoietic stem cells (HSCS), Is

b. Progenitor (precursor) cells (Pro- B and Pro-T cells), Is

 C. Mature cells, Is

 d. Hematopoietic stem cells (HSCS), Is not

e. Progenitor (precursor) cells; Is not

177)In Anti-streptolysin-o latex agglutination test :

a. The antigen (streptolysin-O) is a natural particle.

 b. Antigen molecules (streptolysin-O) are artificially bound to particles

C. Antibody(anti-streptolysin-O) is attached to particles

d. The antigen-antibody reaction is competitive (no agglutination indicates a positive result)

 e. Direct agglutination

178)Which of the following tumour antigens is viral protein:

 a. Carcinoembryonic antigen

b. CD10

C. CD20

d. E6 and E7 proteins

e. alpha feto-protein

180)A patient presents in the winter months with swollen airways. Which of the following does this patient have:

 a. Digeorge syndrome

b. Glucose-6-phosphate dehydrogenase deficiency

c. Hereditary angioedema

d. Severe combined immunodeficiency disease (SCID)

e. Autoimmunity