**Archive Of MID-TERM In Immunology**



1) antiviral activity can be mediated by all except Select one:

a. DC

b. NK

C. Antibody

d. Gamma delta T cells

 e .MHC1 presentation to CD4 T cells

2) In NK all are true except Select one:

 a. Their killing inhibition receptors sense the presence of MHC1

 b. differentiated from the common lymphoid progenitor

 C. express fas

d. express fasL

e kill activated T cells

3) Extensive allelic polymorphism is found in MHC. Select one

a. class 2 DRbeta

b. class 2 DRalpha.

c. beta2-microglobulin.

 d. Class IA loci

e. Class 1 B loci

4)The initial complement component that is bound by complement-foing antibodies is Select one

A.C1q

 B.C1s

C. C3b

D. C5a

e. C9

5) The classical and alternative pathways meet at complement component Select one

a .C4

b. C4b

C. FactorD .

d. C5

e C3

6) The B-cell receptor antigen recognition signal is transduced by Ig alphia and beta and maximtzed by Select one

a The BCR heavy chain.

 b. The BCR light chain

 c. CD20.

 d. CR2 CD19 and R021

7)The major role of the complement system is to work in conjunction with Select one

A.antibodies to lyse cells via the CB and C9 components

 b. the major histocompatibility compiex for cell recognition

 C antibodies to opsonize cells

D.the T-cell receptor for production of lymphokines

E. antibodies to lyse celis via the perforin moecules

8) A member of the immunoglobulin gene superfamily is all except Select one:

a. Fc receptor 1 for IgE

 b. Poly-lg receptor

c. Fc receptor 2 for IgE

d. Fc receptor 1 for IgG

e Fc receptor 1 for IgA

9)Which of the following statement is true for Fab fragment ? Select one

 a Formed by proteolysis of antibody by pepsin

 b. Constituted by heavy chains only

 c .Contain complementarity determining regions (CDR)

 d. Activates complement

 e. Bind antibody receptor

10) gamma delta T-cells All are true except Select one

a CD3 positive cells

B. act against mycobacterium

 c present mainly in mucosal epithelium

 d increase autoimmunity caused be T cells

E.have gamma and deita TCR

11) IGM, all are true except Select one

 a. Is the first antibody formed in immune system

 b. Is the largest antibody

 C. its receptor functions were not defined

 d. have allotype GM

 e has no hinge region

12)MHC class Il molecules are made up of two chains called………… whose function is to bind peptides and presenit them to………… T cells Select one

A.alptia and beta, CD4

B.alpha and beta2-microglobulin CDA

C.alpha and beta: CDB

D. alpha and beta2-mcroglobulin CD5

E.alpha and beta gamma delta cell

13) Somatic hypermutation is Select one:

a. Commonty found in both ig and T-cell receptor genes

b. Restricted to the constant region.

C. Restricted to the beta chain

 d. Found only in Ig heavy chains

 e. Found only in Ig variable regions

14) T and B cells enter the peripheral lymph nodes from circulation, all are true except Select one

 a, through afferent lymptiatic vessel

b. Because they are attracted by chemotactic factors

 c. through high endothelial venules (HEV)

 d. They are activated inside the peripheral lymph node

 e They should be nalve to enter the LN

15) The presence of IgM indicates Select one

a Second exposure to same antigen

 B. An acute infection

 C. An allergic reaction is present

d. A reaction between mother and foetus across the placenta

 e Activation of memory cells

16)Regarding Basophils, which of the following is false: Select one

 a Stain with acid dyes.

b. Contain a major basic protein.

 C. Help in phagocytosis

 d have IGE receptors

  e. secret IGE

17) During B cell development, at what stage is membrane bound IgM found? Select one

a Pro-B cell stage

 b. Early pre-B cell stage

C Late pre-B cell stage

 d Immature cell stage

e Stem cell

18) Viral proteins that are formed inside of an infected cell associate wilth cll and are presented at the surtace of the enfected Select one:

a Cytokines

B.MHC class I'molecules

C MHC class Il molecules

d Antibody molecules

E complement

19)The T cell Receptor complex includes Select one

  a TCR+ CD4

B. TCR+ CD3

 C TCR

 D. TCR+ CD8

E. TCR- CD3 and zeta chains

20) The difference between macrophage and neutrophil Select one

 a Only neutrophil is a phagocyte

b. Only neutrophil does intracellular killing by azurophil lysosomal granules

 c Only neutrophit expresses receptor for IGG

d Only macrophage does the respiratory burst

 e Only neutrophil present in tisue

21) Blocking the binding sites of microbial toxins and viruses so un able to bind cellular receptors is mediated by and is caled Select one:

A.Antibody-Agglutination

B. Antibody- Precipitation

C.Antibody- Neutralization

D. Antibody- ADCC

E. Antibody- opsonization

22)positive B cell selection occurs when a B-lymphocyte encounters Select one

A.self MHC

B. self MHC-Self Antigen

C.foreign antigen

D. Complement

E.Chemotactic factors

23) Natural killers cells are found in all but rare in one:

 a. Blood

 b. Spleen

C. Lymph nodes

d. Red bone marrow

 e bone marrow

24) When a resting nalve T-cell engages its specific MHC/peptide complex displayed on the surface of a DC It frstly Select one

A. Undergoes blast cell formation

B. Produces IL-2

C. undergoes cell death

D.differentiates into effector cells

E.Secretes IL-1

25) The MHC expression is decreased by cell because of infection of Select one:

A.virus

 b. worm

c. bacteria

d. auto immunity

e aging

26)Natural killes cells are found in all but rare in Select one

A. Blood Spleen

B.Lympn nodes

d. Red bone marrow

E.bone marrow

27) When a resting nalve T-cell engages its specific MHC/peptide complex displayed on the surface of a DC It frstly Select one

A. Undergoes blast cell formation

B.Produces IL-2

C.undergoes cell death

D.differentiates into effector cells

E.Secretes IL-1

28) Which of the following is done by easinophils Select one

a Lysis of some viraly infected cells

 b Killing warms by expressing FC epsilon receptors

C. stain biue with basic dve meithylene blue

 d. Kiling wams by expressing FC gamma receptors

 e Kiling warms by secreting IGG

29) In the respiratory burst, ………….are released, which have a potent cell-killing ability Select one

 a free radicals

b. platelet-derived growth factors

c histamines

 d. enzymes

 e major basic protein

30) Which of the following is the ligand for the B cell coreceptor Select one

  a c3

  b. C3b

 C IL-2

d. C3d

 e CR2

31)The phenomenon whereby, following successful Ig gene rearrangement, further rearrangement is suppressed s calet Select one

 a Allelic exclusion

 b Class switching

C Productive rearrangement

 D Clonal selection

E.gene mutation

32) A complement component which is strongly chemotactic for neutrophils is Select one

  a C9

 b. C5a

 c C3

 d. C3b

 e. C5

33) Which of the following statements does not apply to igG?. Select one

 A.Appears earty in the primary immune response

B. Neutralizes bacterial toxins

C.Can fix complement

D.Crosses the human placenta

E.Opsonons bacteria

34) A primary role for antibodies in resistance to bacterial infection is all except Select one:

A.Antibody dependent cell mediated cytotoxicity

B. Lysis of infected host cells

C.Activation of the alternative complement pathway

D.Opsonisation for increased uptake by phagocytic cells

E. neutralize the bacterial toxins

35) Pre-B and T cell proliferate in response to Select one:

 a. Cytokine IL-7

b. Signal transduction from formed Pre-BCR and pre-TCR

 c. Antigen presentation

d. Antibody exposure

 e Mature thymic DC

36) Which of the following gene clusters do not contribute to liatt chain Select one

a Variable Light chain

B Constant Light

C TCR beta chain

d. Diversity gene

  e Joining

37) Which of the following is not involved in first line defense? Select one of

a. Mucus membranes

b. Saliva

C. Tears

d. Antibodies

 e Epidermis

38)Binding of this PRR to a macrophage help in cytokine production Select one

 a Toll like receptors

B. Complement receptors

c.FC receptors

d. Scavenger receptor

e Opsonin receptors

39) One principal function of the Class I and Class Il major histocompatibility complex proteins is to Select one:

A.transduce the signal to the T-cell interior following antigen binding

 b. mediate immunoglobulin class switching

C. present antigen for recognition by the T-cell antigen receptor

 d stimulate production of interteukins

e bind complement C3d,

40) all are true except Select one

 a Help B cells during the processes of selection in atfinity maturation

 b. product of the classical pathway

 c. a product of lectin complement pathways •

d CRI is its receptor on B cells

 e Its receptor on B cells help in entering epstein barr virus

41) Which of the following immune system components would firstly initiate inflammation? Select one

A.macrophages

B.Tampnocyte

 C. B lymphocyte

D. macropmages on mast cells

E.antibodies

42) Which of the following substances will not stimulate an immune response unless they are bound to a larger molecule? Select one:

 a. Antigen

 b. Virus

C. Hapten

 d. Miligen

e. Antibody

43)Predominant immunoglobulin in extenal secretions such tears, mucous is Select one a igE

 b. IgM

C.IgA

D. igG

 E.IgD

44) The germinal center is an important site of Select one:

a. Hematopoiesis

. b. B-cell maturation

. c. B-cell receptor editing

d. Myeloid cell differentiation.

 e antibody V gene rearrangement

45) Complement proteins work by…….. Select one:

a neutralization of antigens

 b. creating an impermeable barrier

C. phagocytosis of target cells

d forming pores in the membranes of target cells

 e producing

46) B cells mature in the………...while T cells mature in the Select one

 a. Thymus/bone marrow

 b. Spleen/bone marrow

C. Bone marrow / Thymus

d. Liver/Kidneys

e Bone marrowl spleen

47)Which of the following structures is constituted by J-cnain binding site Select one

 a both lighf and heavy chains

 B.lignt chains

 C Antigen binding site

d Heavy chains

e Complement tinding site

48) T-cell antigen receptors are distinguished from antibodies by which of the following Select one

a. T-Cell receptors are glycosylated

b. T-cell receptors must interact with antigen uniquely presented by other cells but not with free antigen

C. T-Cell receptors bind various cytokines

 d T-Cell receptors bind complement to lyse cells

  e T-cell receptors are mediators of allergic reactions

49)One function of the complements is to Select one

a inactivate pertorins 5

B.mediate tne release of histamine

C.neuntraize bacteria

D. Phagocytes antigens

50) The CD8 cell surface protein of T cells interact with of MHC class I molecules Select one:

a. alpha-1 subunit

 b. alpha-2 subunit

 c. alpha-3 subunit

d. beta2- macroglobulin

e. beta 1 subunit

51)Human monocional antibodies can be obtained Select one

 a Using Epstein-Barr virus immortalization of T-cells

 b. Easily from human hybndomas selected with HT medium

C using transgenic xenomouse strains

D. By a single point mutation of a mouse monocional antibody

e. Only by fustrng specific mouse B-celis with mouse myeloma cels

52) The subclass of IgG that has lowest serum concentration is Select one:

 a IgG1

 b IgG2

c. IgG3

d. IgG4

e igG5

53) One function of the complements is to Select one:

a. inactivate perforins

b. mediate the release of histamine

c. neuntralize bacteria d phagocytize antigens

 e cross link allergens

54)Peyers Patches are specialized tymphoid aggregates found in the Select one

a Brain

b Lung

c Spleen

d. Gut

e skin

 55) The class of an immunoglobulin Select one:

 a. is determined by Class I and Class II major histocompatibility complex proteins

b. is determined by the carbohydrate attached to the light chain is

c. determined by the variable part

d. is determined by the heavy chain type

e Is determined by the J-chain

56) Natural antibodies: Select one:

a. Are mostly IgG.

 b. Are mostly high affinity IGM.

c. Are produced spontaneously by CD5+ B-cells.

d. Are acquired by transplacental passage from the mother

 e. Do not arise in thymectomized mice

57) Which of the following is the first step in the specific immune response to antigen? Select one

a Memory cell formation

 b Secretion of antibody molecules

c Antigen presentation to T helper cell

d Secretion of cytokines by T helper cell

e plasma cell formation

58) This immune cell is able to respond quickly after any second encounter with the same antigen Select one

a basophil

 b. helper T cell

c memory cell

d antigen-presenting cell

 e. plasma cell

59)Expression of MHC genes is Select one

a Codominant.

b. Dominant for maternal genes

 C.Dominant for paternal genes

d Dependent on thymic selection

eTotally dependent on the T.cells

60) Which nonspecific defense cells specialize in attacking cancer cells and virus-infected cells? Select one

 a macrophages

b. plasma cells

 c. natural kiler cells

 d. helper T lymphocytes

e basophis

61) The T-cell ligand CD28 bind which of the following on a B cell: Select one:

a. B7

b. CD2

C. CD40

 d. CD40L

e LFA-3

62)The Fc receptor with the highest affinity of the following five receptors is:

Select one:

1. CD64
2. FcgRII
3. CD16
4. FceRI
5. CD23

63)Anaphylatoxins C3a and C5a do their function by:

1. Binding their receptors on mast cells
2. Binding their receptors on endothelial cells
3. Binding their receptors on B cells
4. Binding their receptors on DCs

64)Pathogens associated molecular patterns (PAMPs) include All except:

1. Lipopolysaccharides (LPS)
2. Lectin protein
3. Lipoteichoic acid
4. Mannose rich molecules
5. UnmethylatedCpGDNA sequences.

65)The antibody allotype (GM) may present in

Select one:

1. IGA
2. Constant part of IGG
3. IGM
4. IGE
5. Variable part of IGG

66)The IGG with the highest complement activation is:

1. IGG1
2. IGG2
3. IGG3
4. IGG4
5. IGG5

67)\_\_\_\_\_\_\_\_\_\_ of thymocytes is necessary to produce a T-cell repertoire capable of interacting with self-MHC molecules.

Select one:

1. Positive selection
2. Negative selection
3. Apoptosis
4. Receptor editing
5. Isotype switching

68)A lectin pathway in complement activation is all of the following except:

Select one:

1. C3 convertase is the same as in classical pathway
2. Depend on antigen-antibody binding as classical pathway
3. Involve C2 activation
4. Involves C3b
5. Involves C5b

69)A polymorphonuclear neutrophil (PMN):

Select one:

1. Is a bone marrow stem cell.
2. Is a closely similar to a mast cell.
3. Contains microbicidal cytoplasmic granules.
4. Is not a professional phagocytic cell.
5. Has granules which stain with eosin.

70)The paracortical area of lymph node comprises mainly:

Select one:

1. Follicular dendritic cells
2. Plasma cells
3. Neutrophils
4. B-cells
5. T-cells

71)Which of the following is the first stage of T-cell receptor gene rearrangement in alpha: Betta T-cells?

1. V alpha – D alpha
2. D alpha – J alpha
3. V Betta – D Betta
4. D Betta – J Betta
5. V alpha – J alpha

72)After B cells activation in the peripheral lymph nodes All are true except

Select one:

1. B cell converted to CD20+ plasma cells
2. Memory B cell enter circulation
3. Plasma cells reside in the medulla
4. Antibodies enter the circulation
5. B cells from germinal center

73)Which of the following proteins does NOT make up the B cell co-receptor?

Select one :

1. CD19
2. CD21
3. CD20
4. CD81
5. CR2

74)Concerning ADCC all are true except:

1. Antibody is involved
2. It can be carried out by NK cells
3. It leads to activated T cell death
4. It is complement-dependent
5. It can be carried out by eosinophils

75)Variable part of the heavy and chains can be called

1. Allotype
2. Idiotype
3. Epitope
4. Isotype
5. Autotype

76)Pattern recognition receptors on phagocytes include all except

Select one:

1. Scavenger receptor
2. Toll like receptor
3. CR2
4. Fc receptor
5. CR3

77)Paroxysmal nocturnal hemoglobinuria results from deficiency in:

Select one:

1. Myleoperoxidase
2. Decay accelerating factor. (DAF)
3. Classical pathway C components
4. C1 inhibitor
5. CD59

78)The enzyme responsible for isotype switch is

Select one:

1. Activation-induced cytidine deaminase (AID)
2. Synapse
3. RAG-1 and 2 recombinase
4. Artemis endonuclease
5. Ligase

79)Active artificially acquired immunity is a result of \_\_\_\_\_\_\_\_\_\_.

Select one:

1. Injection of an immune serum
2. Contact with a pathogen
3. Antibodies passed on from mother to fetus through the placenta
4. Vaccination
5. Antibodies passed on from mother to baby through breast milk

80)Receptor editing :

Select one:

1. Has been described for B cells before selection stage
2. Is changing the variable part on light chain
3. Is changing the variable part on heavy chain
4. For B-cells only occurs in peripheral lymph node
5. Is changing the constant part in light chain

81)The T cell receptor:

1. Is composed of five polypeptide chains
2. Is secreted into the plasma by the T cell
3. Is the recognition element of the humoral arm of the immune system
4. Recognizes antigen fragments via the alpha and beta chain
5. The signaling element is CD4

82)Where are double positive T cells found?

1. Bone marrow
2. Spleen
3. Thymus cortex
4. Thymus medulla
5. Periphery

83)Which of the following bind antigen at the same time when TCR bind

Select one:

1. LFA-1
2. CD28
3. CD32
4. CD4
5. CD3

84)Which of the following do not bind antigen on T cell activation

Select one:

1. MHC
2. CD4
3. CD8
4. CD3
5. TCR

85)Negative feedback on active B-cell is mediated by:

Select one:

1. Antigen specific IgM
2. Antigen specific IgG
3. Just antigen neutralization
4. Fc gamma receptors on macrophages
5. CD22

86)The main costimulatory molecule for activation on T-cell is provided by:

Select one:

1. CD28
2. Surface Ig
3. B7
4. VLA-4
5. IL-2

87)The CD4 protein of T helper cells binds and stabilize the MHC class II/ peptide structure. The subunit that interacts with CD4 cell surface protein is

Select one:

1. alpha 1 and beta 1 subunit
2. alpha 2 and beta 2 subunit
3. alpha 1 and alpha 2 subunit
4. beta 2 subunit
5. beta 1 subunit

88)an example of a molecule present in memory cells is:

select one:

1. Bcl-2
2. TRAIL
3. Bax
4. FADD
5. Caspase 8

89)Proper hinge region is not present in which of the following antibody?

Select one:

1. IgA
2. IgM
3. IgG1
4. IgD
5. IgG2

90)Fc gamma receptors are all true except

Select one:

1. Present on macrophages
2. FcR2 on B cell
3. FcR1 is high affinity receptor
4. FcR2 on NK
5. After binding the antigen, they help in complement activation

91)Lattice formation happens in all except

Select one:

1. Antigen-antibody binding
2. Precipitation technique
3. Cell bound antigen binding to antibody
4. Occur at optimal concentration of antigen and antibody
5. Can be seen as line between 2 solution

92)T cell surface receptors for antigen partly recognize

Select one:

1. Cytokines
2. MHC
3. ADCC
4. Antibody
5. IL-2

93)Which of the following key components of the complement pathway can be directly activated by the lectin, pathway?

1. C1
2. C2
3. C5
4. C7
5. C9

94)Complement component C3 in alternative pathway is cleaved by

Select one:

1. C3b
2. C3bBb
3. Factor B
4. Simultaneously by antigen
5. Simultaneously by antigen and antibody

95)Classical complement pathway are all true except

Select one

1. Is an effector arm of adaptive immunity
2. Opsonizes bacteria
3. Produce chemotactic and anaphylatoxin
4. Directly activated by bacteria
5. Is firstly discovered

96)Natural antibodies all are true except

Select one:

1. Poly specific
2. Against microbe carbohydrates
3. High affinity IgM
4. Low affinity IgM
5. Produced without T helping of B cells

97)Isotype switch occur in

Select one:

1. Paracortical area of lymph node
2. Cortex of lymph node
3. Bone marrow
4. Medulla
5. Circulation

98)Digeorge syndrome

Select one:

1. Genetic defect in cytokines
2. Is an immune deficiency disease
3. Leads to tumor formation
4. Leads to defect in thyroid gland
5. Leads to defect in innate immunity

99)Proliferation of activated T-cells:

Select one:

1. Is stimulated by a single signal induced by engagement of the T-cell receptor with antigen-MHC
2. Requires both the signal induced by engagement of TCR plus costimulation from B7
3. Requires interaction between LFA-1 and CTLA-4
4. Requires only mutual binding of LFA-3 and CD2 on the antigen-presenting cell and T-cell respectively
5. Can not be stopped

100)Which of the following characteristics is common to both T-cell receptors and immunoglobulins

1. The antigen receptors composed of two identical heavy chains and two identical light chains
2. Receptor editing for both occurs in bone marrow
3. Their production occurs in bone marrow
4. Somatic recombination V,D and J segments is responsible for the diversity of antigen binding site
5. Somatic hypermutation changes the affinity of antigen-binding sites in both and contributes to further diversification

101)Which of the following is NOT true when comparing innate and adaptive immunity?

Select one:

1. Innate responds early and adaptive responds later on
2. Innate has few pathogens (non-self) recognition mechanisms and adaptive has many
3. Innate has immunologic memory and adaptive does not
4. Innate does not show response improvements over time and adaptive does
5. Innate response is non-specific and adaptive is very specific

102)Inflammation is a defensive reaction initiated by infection or tissue injury which causes all except

Select one:

1. Up regulation of adhesion molecules on endothelial cells and leukocytes
2. Cell chemotaxis
3. Increase capillary permeability
4. Arterial construction
5. Increase blood supply to the area

103)IgM: all are true except

Select one:

1. Is firstly produced by B-cell
2. Is most commonly tetrameric
3. Has the same number of constant domains as IgE
4. Is a weak bacterial agglutinator
5. Is the main class of the natural antibodies

104)Pro thymocytes are

Select one:

1. TCR- CD3+ CD4- CD8+
2. TCR- CD3+ CD4- CD8-
3. TCR+ CD3+ CD4- CD8-
4. TCR- CD3- CD4- CD8-
5. TCR-CD3+ CD4+ CD8+

105)All are T-independent B cells except

Select one:

1. Marginal zone B cells
2. B1 cells
3. CD5 B cells
4. Follicular B cells
5. Natural antibody-producing cells

106)CR1 complement receptors on phagocytic cells bind

Select one:

1. Factor H
2. Factor I
3. C3d
4. Only inactive C6
5. C3b

107)Germinal center is incubated with

Select one:

1. Activated T cells
2. Activated B cells
3. Antibodies
4. Naïve B cells
5. Naïve T cells

108)Regarding processed antigen entered the endoplasmic reticulum and bind MHC, all are true except

Select one:

1. the antigen is endogenous antigen
2. the antigen is viral antigen
3. it binds just MHC1
4. can bind MHC2 and MHC1
5. needs peptide transporter to enter endoplasmic reticulum

109)CTLA-4 receptor is

Select one:

1. inhibitory receptor on naïve T cells
2. Inhibitory receptor on active T cells
3. Binds CD28 on APC
4. Inhibitory receptor on macrophages
5. Expressed on naïve T cells

110)The molecules mediating signal transduction following antigen binding to cell surface immunoglobulin on a B-cell are called:

Select one:

1. Ig Fc
2. lg-alpha and lg-beta
3. MHC
4. lg-delta
5. CD8

111)Deletions in the T-cell CD154 (CD40L) gene produce:

 Select one:

1. Congenital X-Iinked agammaglobulinemia
2. IgA deficiency.
3. Deficiency in cytotoxic T-cell activity
4. The hyper—lgM syndrome.
5. Wiskott—Aldrich Syndrome.

112)The mononuclear phagocyte system does not include:

 Select one:

1. Monocytes.
2. Kupffer cells
3. Kidney mesangial cells.
4. Microglial cells in brain.
5. Endothelial cells.

113)Comparing the arrangement of TCR genes and BCR genes, the \_\_\_\_\_\_\_\_ chain is analogous to the heavy (H) chain and the \_\_\_\_\_\_\_ chain is analogous to the light (L) Chain.

Select one:

1. alpha, Beta
2. Beta, alpha
3. gamma, delta
4. Beta, delta
5. delta, alpha

114)Somatic hyper mutation.

 Select one:

1. Occurs in the Bone Marrow.
2. Involves immunoglobulin V genes
3. Do not need T cell help.
4. Can decrease the affinity of an antibody.
5. Is Changing the variable part on light chain.

115)All are functions of Fc part of antibody except

Select one:

1. Complement activation
2. Antigen opsonization
3. Help in Macrophage phagocytosis
4. Determine isotype
5. Binding C1q

116)What is the major site tor naïve B and T cells activation:

 Select one:

1. Spleen
2. Bone marrow
3. Lungs
4. Thymus
5. Kidney

117)All of the following are true of antigen EXCEPT which one of the following?

Select one:

1. They contain epitopes.
2. They will react with antibodies.
3. They contain antigenic determinants.
4. They can elicit an immune response
5. They contain paratopes

118)Mature B cell can be detected by the presence of

Select one:

1. CD20
2. CD32
3. CD21
4. CD28
5. CD40

119)A Fab fragment:

Select one:

1. Is produced by pepsin treatment.
2. Is produced by separation of heavy and light chains.
3. Binds antigen.
4. Lacks light chains.
5. Has no interchain disulfide bonds
6. Which of the following gene is not the part of MHC genes

Select one:

1. DP gene
2. DR gene
3. complement gene
4. TNF gene
5. IFN genes

120)Neutrophil nitric oxide is:

Select one:

1. Anti-toxins enzyme
2. Oxygen-dependent.
3. Enzymes.
4. Glycolipids.
5. Peptide antibiotics