Archive Of MID-TERM In Immunology

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

Select one:

a) CD64
b) FcgRII
c) CD16
d) FceRI
e) CD23

2)Anaphylatoxins C3a and C5a do their function by:

a) Binding their receptors on mast cells
b) Binding their receptors on endothelial cells
c) Binding their receptors on B cells
d) Binding their receptors on DCs

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

a) Lipopolysaccharides (LPS)
b) Lectin protein
c) Lipoteichoic acid
d) Mannose rich molecules
e) UnmethylatedCpGDNA sequences.

4)The antibody allotype (GM) may present in

Select one:

a) IGA

b) Constant part of IGG
c) IGM
d) IGE
e) Variable part of IGG

5)The IGG with the highest complement activation is:

a) IGG1
b) IGG2
c) IGG3
d) IGG4
e) IGG5

6)_____ of thymocytes is necessary to produce a T-cell repertoire capable of interacting with self-MHC molecules.

Select one:

a) Positive selection
b) Negative selection
c) Apoptosis
d) Receptor editing
e) Isotype switching

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

Select one:

a) C3 convertase is the same as in classical pathway
b) Depend on antigen-antibody binding as classical pathway

c) Involve C2 activation
d) Involves C3b
e) Involves C5b

8)A polymorphonuclear neutrophil (PMN):

Select one:

a) Is a bone marrow stem cell.
b) Is a closely similar to a mast cell.
c) Contains microbicidal cytoplasmic granules.
d) Is not a professional phagocytic cell.
e) Has granules which stain with eosin.

9)The paracortical area of lymph node comprises mainly:

Select one:

a) Follicular dendritic cells
b) Plasma cells
c) Neutrophils
d) B-cells
e) T-cells

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

a) V alpha – D alpha
b) D alpha – J alpha
c) V Betta – D Betta
d) D Betta – J Betta
e) V alpha – J alpha

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

Select one:

a) B cell converted to CD20+ plasma cells
b) Memory B cell enter circulation
c) Plasma cells reside in the medulla
d) Antibodies enter the circulation
e) B cells from germinal center

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

Select one :

a) CD19
b) CD21
c) CD20
d) CD81
e) CR2

13)Concerning ADCC all are true except:

a) Antibody is involved
b) It can be carried out by NK cells
c) It leads to activated T cell death
d) It is complement-dependent
e) It can be carried out by eosinophils

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

a) Allotype
b) Idiotype
c) Epitope
d) Isotype
e) Autotype

15)Pattern recognition receptors on phagocytes include all except

Select one:

a) Scavenger receptor
b) Toll like receptor
c) CR2
d) Fc receptor
e) CR3

16)Paroxysmal nocturnal hemoglobinuria results from deficiency in:

Select one:

a) Myleoperoxidase
b) Decay accelerating factor. (DAF)
c) Classical pathway C components
d) C1 inhibitor
e) CD59

17)The enzyme responsible for isotype switch is

Select one:

a) Activation-induced cytidine deaminase (AID)
b) Synapse
c) RAG-1 and 2 recombinase

d) Artemis endonuclease
e) Ligase

18)Active artificially acquired immunity is a result of _____.

Select one:

a) Injection of an immune serum
b) Contact with a pathogen
c) Antibodies passed on from mother to fetus through the placenta
d) Vaccination
e) Antibodies passed on from mother to baby through breast milk

19)Receptor editing :

Select one:

a) Has been described for B cells before selection stage
b) Is changing the variable part on light chain
c) Is changing the variable part on heavy chain
d) For B-cells only occurs in peripheral lymph node
e) Is changing the constant part in light chain

20)The T cell receptor:

a) Is composed of five polypeptide chains
b) Is secreted into the plasma by the T cell
c) Is the recognition element of the humoral arm of the immune system
d) Recognizes antigen fragments via the alpha and beta chain
e) The signaling element is CD4

21)Where are double positive T cells found?

a) Bone marrow
b) Spleen
c) Thymus cortex
d) Thymus medulla
e) Periphery

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

Select one:

a) LFA-1
b) CD28
c) CD32
d) CD4
e) CD3

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

Select one:

a) MHC
b) CD4
c) CD8
d) CD3
e) TCR

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

Select one:

a) Antigen specific IgM
b) Antigen specific IgG
c) Just antigen neutralization
d) Fc gamma receptors on macrophages
e) CD22

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

Select one:

a) CD28
b) Surface Ig
c) B7
d) VLA-4
e) IL-2

26)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:

a) alpha 1 and beta 1 subunit
b) alpha 2 and beta 2 subunit
c) alpha 1 and alpha 2 subunit
d) beta 2 subunit
e) beta 1 subunit

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

select one:

a) Bcl-2
b) TRAIL
c) Bax
d) FADD
e) Caspase 8

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

Select one:

a) IgA
b) IgM
c) IgG1
d) IgD
e) IgG2

29)Fc gamma receptors are all true except

Select one:

a) Present on macrophages
b) FcR2 on B cell
c) FcR1 is high affinity receptor
d) FcR2 on NK
e) After binding the antigen, they help in complement activation

30)Lattice formation happens in all except

Select one:

a) Antigen-antibody binding
b) Precipitation technique

c) Cell bound antigen binding to antibody
d) Occur at optimal concentration of antigen and antibody
e) Can be seen as line between 2 solution

31)T cell surface receptors for antigen partly recognize

Select one:

a) Cytokines
b) MHC
c) ADCC
d) Antibody
e) IL-2

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

a) C1
b) C2
c) C5
d) C7
e) C9

33)Complement component C3 in alternative pathway is cleaved by

Select one:

a) C3b
b) C3bBb
c) Factor B
d) Simultaneously by antigen
e) Simultaneously by antigen and antibody

34)Classical complement pathway are all true except

Select one

a) Is an effector arm of adaptive immunity
b) Opsonizes bacteria
c) Produce chemotactic and anaphylatoxin
d) Directly activated by bacteria
e) Is firstly discovered

35)Natural antibodies all are true except

Select one:

a) Poly specific
b) Against microbe carbohydrates
c) High affinity IgM
d) Low affinity IgM
e) Produced without T helping of B cells

36)Isotype switch occur in

Select one:

a) Paracortical area of lymph node
b) Cortex of lymph node
c) Bone marrow
d) Medulla
e) Circulation

37)Digeorge syndrome

Select one:

a) Genetic defect in cytokines

b) Is an immune deficiency disease
c) Leads to tumor formation
d) Leads to defect in thyroid gland
e) Leads to defect in innate immunity

38)Proliferation of activated T-cells:

Select one:

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

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

a) The antigen receptors composed of two identical heavy chains and two identical light chains
b) Receptor editing for both occurs in bone marrow
c) Their production occurs in bone marrow
d) Somatic recombination V,D and J segments is responsible for the diversity of antigen binding site
e) Somatic hypermutation changes the affinity of antigen-binding sites in both and contributes to further diversification

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

Select one:

a) Innate responds early and adaptive responds later on
b) Innate has few pathogens (non-self) recognition mechanisms and adaptive has many
c) Innate has immunologic memory and adaptive does not
d) Innate does not show response improvements over time and adaptive does
e) Innate response is non-specific and adaptive is very specific

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

Select one:

a) Up regulation of adhesion molecules on endothelial cells and leukocytes
b) Cell chemotaxis
c) Increase capillary permeability
d) Arterial construction
e) Increase blood supply to the area

42)IgM: all are true except

Select one:

a) Is firstly produced by B-cell
b) Is most commonly tetrameric
c) Has the same number of constant domains as IgE
d) Is a weak bacterial agglutinator
e) Is the main class of the natural antibodies

43)Pro thymocytes are

Select one:

a) TCR- CD3+ CD4- CD8+
b) TCR- CD3+ CD4- CD8-
c) TCR+ CD3+ CD4- CD8-
d) TCR- CD3- CD4- CD8-
e) TCR-CD3+ CD4+ CD8+

45)All are T-independent B cells except

Select one:

a) Marginal zone B cells
b) B1 cells
c) CD5 B cells
d) Follicular B cells
e) Natural antibody-producing cells

46)CR1 complement receptors on phagocytic cells bind

Select one:

a) Factor H
b) Factor I
c) C3d
d) Only inactive C6
e) C3b

47)Germinal center is incubated with

Select one:

a) Activated T cells
b) Activated B cells
c) Antibodies

d) Naïve B cells
e) Naïve T cells

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

Select one:

a) the antigen is endogenous antigen
b) the antigen is viral antigen
c) it binds just MHC1
d) can bind MHC2 and MHC1
e) needs peptide transporter to enter endoplasmic reticulum

48)CTLA-4 receptor is

Select one:

a) inhibitory receptor on naïve T cells
b) Inhibitory receptor on active T cells
c) Binds CD28 on APC
d) Inhibitory receptor on macrophages
e) Expressed on naïve T cells

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

Select one:

a) Ig Fc

b) lg-alpha and lg-beta
c) MHC
d) lg-delta
e) CD8

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

Select one:

a) Congenital X-Iinked agammaglobulinemia
b) IgA deficiency.
c) Deficiency in cytotoxic T-cell activity
d) The hyper—lgM syndrome.
e) Wiskott—Aldrich Syndrome.

51)The mononuclear phagocyte system does not include:

Select one:

a) Monocytes.
b) Kupffer cells
c) Kidney mesangial cells.
d) Microglial cells in brain.
e) Endothelial cells.

52)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:

a) alpha, Beta
b) Beta, alpha

c) gamma, delta
d) Beta, delta
e) delta, alpha

53)Somatic hyper mutation.

Select one:

a) Occurs in the Bone Marrow.
b) Involves immunoglobulin V genes
c) Do not need T cell help.
d) Can decrease the affinity of an antibody.
e) Is Changing the variable part on light chain.

54)All are functions of Fc part of antibody except

Select one:

a) Complement activation
b) Antigen opsonization
c) Help in Macrophage phagocytosis
d) Determine isotype
e) Binding C1q

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

Select one:

a) Spleen
b) Bone marrow
c) Lungs
d) Thymus

e) Kidney

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

Select one:

a) They contain epitopes.
b) They will react with antibodies.
c) They contain antigenic determinants.
d) They can elicit an immune response
e) They contain paratopes

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

Select one:

a) CD20
b) CD32
c) CD21
d) CD28
e) CD40

58)A Fab fragment:

Select one:

a) Is produced by pepsin treatment.
b) Is produced by separation of heavy and light chains.
c) Binds antigen.
d) Lacks light chains.

e) Has no interchain disulfide bonds

1) 59) Which of the following gene is not the part of MHC genes

Select one:

a) DP gene
b) DR gene
c) complement gene
d) TNF gene
e) IFN genes

60)Neutrophil nitric oxide is:

Select one:

a) Anti-toxins enzyme
b) Oxygen-dependent.
c) Enzymes.
d) Glycolipids.
e) Peptide antibiotics