Memory Test - Immunology_Class test_Jan_2021_Online_Foundation_1

Total Mark: 100
Time: 90 Min

1. Following are applicable for IgG
A) Binds to mast cells
B) Binds antigen firmly than any other immunoglobulin
C) Highest molecular weight among all immunoglobulins
D) Longest half-life among all immunoglobulins
E) Found mainly in secretion
Answer: F, T, F, T, F
Discussion:
Reference: [Ref : Lange 14th P- 524-525]

2. Immune components that react with Fc portion of antibody are-
A) B cells
B) C3a
C) IgE
D) Macrophages
E) NK cells
Answer: T, F, F, T, T
Discussion:
Reference: (Ref: Lange 15th/523-524, 556)

3. Immuno-suppressive agents used in transplantation are
A) Anti-thymocyte globulin
B) Ciclosporin
C) Corticosteroid
D) Interferon alpha
E) Plasmapheresis
Answer: T, T, T, F, F
Discussion:
Reference: (Ref: Davidson/23rd/T-4.26/89; Bailey & Love/27th/T-82.3/1538)

4. Infections causing secondary immune deficiencies
A) HIV
B) Mumps
C) Measles
D) MTB
E) Pneumococcus
Answer: T, F, T, T, F
Discussion:
Reference: (Ref: Davidson`s 23rd page-80, box 4.16)

5. Passive immunization is given in-
A) Botulism
B) Cholera
C) Diphtheria
D) Enteric fever
E) Rabies
Answer: T, F, T, F, T
Discussion: Explanation: Passive Immunization– Diptheria, Tetanus , Botulism, Rabies, Hepatitis A & B
Reference: [Lange 15th/524]

6. Regarding the major histocompatibility complex (MHC) in man--
A) Gene is situated on chromosome 6
B) Is involved in antigen presentation
C) Is located on surface of all nucleated cells
D) Has association with some autoimmune diseases
E) Is tested on a serum sample
Answer: T, T, T, T, F
Discussion:
Reference: [Ref: Lange 14th P- 536]

7. Regarding B cells-
A) As much as 40% of B cells develop in GALT (gut associated lymphoid tissue)
B) B cells are poor activator of “virgin” Th cells in primary immune response because B cells do not make IL-10
C) Maturation: Bone marrow
D) Most memory B cells have surface IgG as Ag receptor, but some have IgM
E) They differentiate into plasma cells & secrete thousands of Ab per second for a few days & then die
Answer: F, F, T, F, T
Discussion:
Reference: (Ref: Lange 15th/518-519)

8. B cell immunodeficiency states are-
A) DiGeorge syndrome
B) Hereditary angioedema
C) Hyper IgM syndrome
D) Selective IgA deficiency
E) X-linked agammaglobulinemia
Answer: F, F, T, T, T
Discussion:
Reference: [Ref: Lange 15th/574-576]

9. Cell- mediated hypersensitivity includes
A) Atopic dermatitis
B) Contact dermatitis
C) Goodpasture's syndrome
D) Steven Johnson syndrome
E) Tuberculin skin test reaction
Answer: F, T, F, T, T
Discussion:
Reference: (Ref: Lange 15th/553, tab-65.2)

10. Characteristics of innate immunity are-
A) Acute phase proteins play important role
B) First and second body defenses
C) Immune response is specific
D) Long lasting immunity
E) Rapid onset of action
Answer: T, T, F, F, T
Discussion: TTF(non-specific)F(short)T
Reference: [Ref: Lange 15th/475, 476]

11. Complement activation takes place
A) In the presence of endotoxin
B) As part of the tuberculin reaction
C) By more than one pathway
D) In anaphylaxis
E) By antigen IgA interaction
Answer: T, F, T, F, F
Discussion:
Reference: [Ref: Smiddy-7.17]

12. Components of CMI include-
A) Basophil
B) CD4+lymphocyte
C) Macrophage
D) Memory T cell
E) Platelet
Answer: F, T, T, T, F
Discussion:
Reference: [Ref: Lange 15th/475, 505]

13. Following are the cell surface proteins that play an important role in immune response-
A) CD28 in helper T cells
B) CD8 in cytotoxic T cells
C) B7 in macrophages
D) Class II MHC in B cells
E) TCR in helper T cells not in cytotoxic T cells

Answer: T, T, T, T, F
Discussion:
Reference: [Ref: Lange 15th/511-513]

14. Following are true about IgG
A) Can provide mucosal immunity
B) Fixes complement
C) Only antibody produced in the secondary immune response
D) Only IgG2 can cross placenta
E) Opsonizes bacteria
Answer: T, T, F, F, T
Discussion:
Reference: (Ref: Lange 15th/524-525)

15. Following statements are true for primary immune response
A) Antibody affinity is lower
B) Antigens are thymus dependent
C) IgG predominates
D) Responding B cell is memory B cell
E) Time of peak response is generally 7-10 days

Answer: T, F, F, F, T
Discussion:
Reference: [Ref: Lange Micro page-522]

16. HLA matching is required in transplant of-
A) Bone
B) Bone marrow
C) Cornea
D) Kidney
E) Liver
Answer: F, T, F, T, F
Discussion: (HLA matching is not even attempted in some situations, such as heart, lung, liver, and islet transplantation)
Reference: [Ref. Robbin's 9th P-234]

17. Live, attenuated viral vaccines are against--
A) Human papilloma virus
B) Rabies virus
C) Rubella virus
D) Varicella-Zoster virus
E) Yellow fever virus
Answer: F, F, T, T, T
Discussion: F(Subunit)F(Killed)TTT
Reference: (Ref: Lange 15th/273, tab-36.2)

18. Main functions of helper T cells -
A) Activate B cells via IL-1
B) Activate CD8+ cells via IL-2
C) Activate eosinophil via TNF
D) Activate macrophages through ?-IFN
E) Activate natural killer cells via IL-6
Answer: F, T, F, T, F
Discussion:
Reference: [Ref: Lange 15th/510-512, tab-60.2]

19. Mineral deficiencies causing secondary immune deficiencies
A) Zinc
B) Selenium
C) Iodine
D) Iron
E) Copper
Answer: T, F, F, T, F
Discussion:
Reference: (Ref: Davidson`s page-80, box 4.16)

20. Pre-transplantation testing –
A) HLA typing
B) Anti-HLA antibodies
C) Donor-recipient cross matching
D) C4d staining
E) Genetic analysis
Answer: T, T, T, F, F
Discussion:
Reference: (Ref: Davidson 23rd/page-89)

21. Professional antigen presenting cells are-
A) B cell
B) Microglia
C) Monocyte
D) Neutrophil
E) Plasma cell
Answer: T, T, T, F, F
Discussion:
Reference: (Ref: Lange 15th/486, 520, 531)

22. Role of complement component in acute inflammation
A) C3a increases vascular permeability
B) C4a produces endothelial damage
C) Neutrophils are attracted by C5a
D) C3b helps in phagocytosis
E) C5b acts as membrane attacking protein
Answer: T, F, T, T, F
Discussion:
Reference: [Ref: Lange 15th/539, Robbins 9th/P-90 tab3.7]

23. The following diseases are immunologically mediated
A) Duchene muscular dystrophy
B) Familial periodic paralysis
C) Multiple sclerosis
D) Myasthenia gravis
E) Parkinson's disease
Answer: F, F, T, T, F
Discussion:
Reference: [ref: Lange 15th/565-568]

24. Transfer of maternal antibody in –
A) Grave`s disease
B) Myasthenia gravis
C) Non-immune vasculitis
D) Rheumatoid arthritis
E) Systemic lupus erythematosus
Answer: T, T, F, F, T
Discussion:
Reference: (Ref: Davidson`s page-88, box 4.24)

25. Vaccines included in EPI schedule are against the following pathogens-
A) Hepatitis B
B) Influenza virus
C) Meningococci
D) Mumps
E) Rota virus
Answer: T, F, F, F, F
Discussion:
Reference: [ref: AH Mollah 4th/

26. A 22 year old woman has a malar rash that get worse in sun exposure. She has lost about 5kg weight and feels tired much of the time. Her temperature is around 99.50F. Laboratory test revealed Hb- 10.5g/dL, Total leukocyte count- 5500/cmm. Urinalysis showed albumin in the urine, but no red cells, white cells or bacteria. Which autoantibody you will search for MOST specificity to diagnose the case as SLE ?
A) Anti nuclear antibody
B) Anti dsDNA antibody
C) Anti sm antibody
D) Anti Ro antibody
E) Anti phospholipid antibody
Answer: C
Discussion:
Reference:

27. A child disturbs a wasp nest, is stung repeatedly, and goes into shock within minutes, manifesting respiratory failure and vascular collapse. This is MOST likely to be due to--
A) Arthus reaction
B) Cytototoxic hypersensitivity
C) Delayed hypersensitivity
D) Serum sickness
E) Systemic anaphylaxis
Answer: E
Discussion:
Reference: (Ref: Lange Micro page-553)

28. A teenage boy had recurrent abscesses on his buttock and legs in last few months. Culture showed growth of staphylococcus aureus. If you suspect a congenital immunodeficiency here, the MOST probable enzyme defect might be in--
A) Adenosine deaminase
B) Myeloperoxidase
C) Neutrophil elastase
D) NADPH oxidase
E) Tyrosine kinase
Answer: D
Discussion:
Reference: (Ref: Lange 15th/576]

29. All of the following describe the primary function of phagocytes, EXCEPT –
A) Engulfing and killing invading microbes
B) Expression of proinflammatory cytokines and chemokines
C) Attacking cells with perforins and granzymes
D) Production of free oxidative radicals
E) Presentation of antigen peptides in complex with MHC to T-cells
Answer: C
Discussion:
Reference: (Ref: Lange 15th/486-488)

30. All the following cells are involved in delayed type hypersensitivity, EXCEPT–
A) Macrophage
B) TH1 cell
C) CD4+ cell
D) B lymphocyte
E) CD8+ cell
Answer: D
Discussion:
Reference: (Ref: Lange 15th/558)

31. Complement can enhance phagocytosis because of presence of receptor on macrophages and neutrophils
A) C5a
B) C3a
C) C3b
D) Factor D
E) C7
Answer: C
Discussion:
Reference: [Ref : Lange 15th/P-539]

32. Components of innate immunity are all, EXCEPT-
A) Basophil
B) Eosinophil
C) Lymphocyte
D) Macrophage
E) Neutrophil
Answer: E
Discussion:
Reference: (Ref: Lange 15th/488)

33. Example of type II hypersensitivity except –
A) Drug induced hemolytic anemia
B) Erythroblastosisfoetalis
C) Rheumatic fever
D) Post infectious glomerulonephritis (PIGN)
E) ITP
Answer: D
Discussion:
Reference: (Ref: Lange Micro page-565)

34. False regarding hereditary angioedema–
A) Autosomal dominant disorder
B) Key mediator is bradykinin
C) Does not cause anaphylaxis
D) Low serum C1 inhibitor is confirmatory
E) Anabolic steroids, such as danazol is used in acute attack
Answer: E
Discussion:
Reference: (Ref: Davidson`s page-87, 88)

35. High ESR with normal CRP except-
A) Crohn`s disease
B) Sjogrens syndrome
C) Multiple myeloma
D) ESRD
E) Pregnancy
Answer: A
Discussion:
Reference: (Ref: Davidson 23rd/72, BOX 4.4)

36. Hyper acute rejection of grafts-
A) Occurs within 2-4 days of transplantation
B) Associated with T-cell mediated reaction
C) Can not be minimized by matching blood group
D) May occurs in autograft
E) Mediated by preformed antibodies
Answer: E
Discussion:
Reference: (Ref: Lange Micro page-543)

37. Hypocomplementemia occurs in all of the following cases, EXCEPT--
A) Acute post-infectious glomerulonephritis
B) Cryoglobulinemia
C) IgA nephropathy
D) Subacute bacterial endocarditis
E) Systemic lupus erythematosus
Answer: C
Discussion:
Reference: (Ref: Davidson 23rd/401)

38. If a person had a mutation in the gene encoding 'J' chains, which of the following classes of antibodies could NOT be produced?
A) IgA and IgM
B) IgA and IgG
C) IgM and IgE
D) IgG and IgE
E) IgD and IgE
Answer: A
Discussion:
Reference: (Ref: Lange 15th/524-525)

39. If you have found some cells with reduced expression of MHC class-I molecules on their surfaces, which immune cells are going to take care of these cells?
A) B-cell
B) Cytotoxic T-cell
C) Macrophage
D) Natural killer cell
E) Neutrophil
Answer: D
Discussion:
Reference: (Ref: Lange 15th/490)

40. Macrophages-
A) Have phagocytic but not pinocytic capabilities

B) Are derived from blood microcytes
C) Have a shorter life span than monocytes
D) Contain neutral proteases
E) Produce IL-1, IL-17, PDGF, collagenase, elastase

Answer: E
Discussion:
Reference: (Ref: Lange Micro page-486)

41. The histopathology report for a granulomatous lesion suggests chronic inflammation. Which cell types are most commonly seen in tissue undergoing chronic inflammation?
A) Eosinophils
B) Lymphocytes
C) Mast cells
D) Neutrophils
E) Platelets
Answer: B
Discussion:
Reference: (Ref: Lange Micro page-565)

42. Which one of the following laboratory tests would be the best to determine the number of CD4-positive cells in the blood of a patient infected with HIV?
A) Agglutination
B) Complement fixation
C) ELISA
D) Flow cytometry
E) Immunoelectrophoresis
Answer: D
Discussion:
Reference: (Ref: Lange Micro page-518)

43. You want to recheck the quality or competence of T-cell in case of an HIV infected patient, whose CD4+ cell count is almost normal. Which in-vivo test can you do?
A) Agglutination test
B) Candida skin test
C) Complement fixation test
D) ELISA
E) Flow cytometry
Answer: B
Discussion:
Reference: (Ref: Lange 15th/516)

44. Cell mediated immunity is seen in all of the following, EXCEPT–
A) Killing of Chlamydia infected cell
B) Killing of tumor cells
C) Graft rejection
D) Mycobacterial diseases
E) Hyperacute graft rejection
Answer: E
Discussion:
Reference: (Ref: Lange 15th/477, 532)

45. Following features are all consistent with microbiome, EXCEPT-
A) Exogenous commensal bacteria
B) Reside at epithelial surfaces in symbiosis with the human host
C) Compete with microorganisms for space and nutrients
D) Produce fatty acids and bactericidins
E) Shape the immune response by inducing specific Treg cells within the intestine
Answer: A
Discussion:
Reference: (Ref: Lange Micro page-483)

46. IL-4 is produced by –
A) TH1 cells
B) TH2 cells
C) TH17 cells
D) Macrophages
E) Neutrophils
Answer: B
Discussion:
Reference: (Ref: Lange 15th/512, tab- 60.2)

47. Organ specific autoimmune diseases are all, EXCEPT--
A) Celiac disease
B) Pernicious anemia
C) Rheumatoid arthritis
D) Type-1 diabetes mellitus
E) Ulcerative colitis
Answer: C
Discussion:
Reference: (Ref: Lange 15th/565-568)

48. Regarding the function of different classes of immunoglobulins, which one of the following statements is the MOST accurate? –
A) IgA acts as an antigen receptor on the surface of B-cells
B) IgD activates the alternative pathway of complement, resulting in the production of C3a that degrades the bacterial cell wall
C) IgG binds to the bacterial surface and makes the bacteria more easily ingested by phagocytes
D) IgM defends against worm parasites, such as hookworms
E) IgE blocks the binding of viruses to the gut mucosa
Answer: C
Discussion:
Reference: (Ref: Lange 15th/524-526)

49. Regarding the graft versus host reaction, which one of the following is the MOST accurate?
A) When a kidney is transplanted
B) By mature T cells in the graft
C) When ABO blood groups are matched
D) When donor is immunocompromised
E) When haplotypes of the donor and recipient are matched
Answer: B
Discussion:
Reference: (Ref: Lange 15th/534)

50. The main advantage of passive immunization over active immunity is that:
A) It can be administered orally
B) Antibody persists for a long period
C) It provides antibody more rapidly
D) It contains primarily IgM
E) No chance of hypersensitivity
Answer: C
Discussion:
Reference: (Ref: Lange 15th/478)