

Question BANK
UNIT I

10 marks question:

1. Describe about Nonspecific defenses of the host.
2. Discuss about mechanism of non-specific defenses
3. Discuss about skin and mucous membrane as a first line of defense.
4. Describe about Phagocytosis with suitable diagram.
5. Describe about Phagocytosis with suitable diagram.
6. Discuss about mechanism and types of inflammation with suitable diagram.
7. Explain about classical pathway of complement activation.
8. Brief on various mechanisms of second line of defense.
9. Describe about acquired immunity.
10. Describe about organs of immunity.
11. Explain about Primary lymphoid organs
12. Brief about secondary lymphoid organs

5 Marks question:

1. Discuss about factors influences innate immunity.
2. Give an account on interferon production and action.
3. Brief about fever as physiological defense.
4. Brief on various mechanisms of First line of defense.
5. Compare acquire and innate immunity.
6. Difference between active immunity and passive immunity.
7. With suitable diagram explain phagocytosis process.
8. Write an note of Bursa of fabricus.
9. Diagrammatically explain thymus.
10. Diagrammatically explain lymph nodes.
11. Diagrammatically explain spleen.

2 1/2 Marks question:

1. Give short note on species immunity
2. Give short note on Racial immunity
3. Give short note on Individual immunity
4. Write short note on fever
5. Write short note on MALT
6. Write short note on GALT
7. Write short note on CALT.
8. Draw a well labeled diagram of lymph node.
9. Draw a well labeled diagram of thymus.
10. Draw a well labeled diagram of spleen.

1 Mark question:

1. Define Interferon
2. What are complements
3. What is opsonin?
4. What is toxoid?
5. Define vaccine.
6. Give two example of species immunity.
7. Give two example of Racial immunity
8. Give two example of Individual immunity
9. What is lysozyme?
10. Define phagocytes.
11. Define MAC
12. What are pyrogens
13. Lymphoid follicles.
14. Phagosome
15. Phagolysosome.
16. ROS (Reactive oxygen species)
17. RNS (Reactive Nitrogen species)

18. Two examples of live vaccines.
19. Two example of toxoid.
20. Two examples of killed bacterial vaccines.
21. Two examples of killed viral vaccines.

UNIT II

10 marks question:

1. Describe about haemopoiesis with suitable diagram.
2. Explain about cells of immune system
3. Describe about structure and function of Granulocytes.
4. Describe about structure and function of Lymphocytes.
5. Explain about mechanism of acquired immunity.
6. Discuss about primary and secondary immune response.
7. Describe about clonal selection and clonal deletion.
8. Describe in detail about humoral immunity.
9. Brief on T dependent humoral immunity.
10. Write a note on dendritic cells
11. Explain about complement mediated lysis of pathogen.

5 Marks question:

1. Brief on T independent humoral immunity.
2. Explain ADCC-Antibody dependant cell cytotoxicity.
3. Explain opsonization.
4. Discuss about various types of T cells.
5. Explain about functions of cytokines.
6. Explain mechanism of cell mediated immunity.
7. What are Autocrine, Paracrine and Endocrine functions of cytokines?
8. Structure of MHC molecule
9. Give short note on structure and function of B cell
10. Give short note on structure and function of T cell
11. Give short note on structure and function of Monocytes and macrophages
12. Give short note on structure and function of Neutrophils
13. Give short note on structure and function of Eosinophils
14. Give short note on structure and function of basophiles
15. Give short note on structure and function of Mast cells
16. Give short note on structure and function of Dendritic cells
17. Give short note on structure and function of Natural Killer cells
18. Write a note on dendritic cells
19. Give short note on cytotoxic T (Tc) cell.
20. Give short note on Cluster of differentiation.

2 ½ Marks question:

1. Draw general structure of B cell receptor for antigen.
2. Write a note on structure of TCR.
3. Difference between monocyte and macrophages.
4. Name any two dentritic cells.

1 Mark question:

1. Cluster of differentiation(CD)
2. Define plasma cells.
3. Define hematopoiesis.
4. What are NK cell
5. Define memory cell.
6. What is TCR.
7. How TH cell and Tc cell differentiated.
8. Define primary immune response.
9. What is immunological memory?

10. Define immune tolerance.
11. Define anergy.
12. Define opsonization.
13. What is MHC?
14. Define cytokine.
15. What are chemokine?
16. What are Interleukin?
17. What are TNF.
18. Name any two antigen presenting cells.

UNIT III

10 Marks Question:

1. Explain about antigenic determinants. Describe characteristics of human antigens.
2. Explain general structure of immunoglobulin using suitable diagram.
3. Give comparative account on structure and biological function of various classes of human antibodies.
4. Discuss about Isotypes, allotypes and idiotypes.
5. Give detail on IgM.
6. Differentiate between IgG and IgM
7. Give short note on haptens and how they become complete antigens?
8. Write note on adjuvants.
9. Describe about antigenic mosaic of Bacteria.
10. Describe about mechanism of action of antibody
11. Describe about Affinity and Avidity
12. Explain about antibody titre.
13. Explain lattice hypothesis
14. Explain Bordet two stage theory of precipitation.
15. Discuss mechanism of precipitation.
16. Describe immune-diffusion technique.
17. Describe Ouchterlony method of Immunodiffusion.
18. Explain Oudin's test for Immunodiffusion
19. Explain about Okley and Fulthorpe method of Immunodiffusion.
20. Explain zone phenomenon
21. Describe radial Immunodiffusion.
22. Explain Rocket immune-electrophoresis.
23. Explain about different immune electrophoresis techniques.
24. Explain cross over immune electrophoresis.
25. Discuss about mechanism of agglutination reaction and describe various types of agglutination tests.
26. Explain haemagglutination reaction.
27. Explain about haemagglutination inhibition reaction.
28. Explain Coombs' test.

5 Marks Question:

1. Describe characteristics of human antigens.
2. Describe about antigenic determinant.
3. Describe about factors determining Antigenicity
4. Discuss about types of epitopes.
5. Discuss about T dependent and T independent antigens.
6. Describe biological function of various classes of human antibodies.
7. Discuss about Isotypes, allotypes and idiotypes.
8. Differentiate between IgG and IgM
1. Write note on adjuvants.
2. Draw structure of IgG.

3. Draw structure of IgM.
4. Draw structure of IgA.
5. Draw structure of IgE.
6. Draw structure of IgD.
7. Explain about antibody titre.
8. Discuss about factors affecting Ag-Ab reaction
9. Explain lattice hypothesis
10. Explain Bordet two stage theory of precipitation.
11. Discuss mechanism of precipitation.
12. Describe immune-diffusion technique.
13. Describe Ouchterlony method of Immunodiffusion.
14. Explain Oudins test for Immunodiffusion
15. Explain about Okley and Fulthrorbe method of Immunodiffusion.
16. Explain zone phenomenon
17. Describe radial Immunodiffusion.
18. Explain Rocket immune-electrophoresis.
19. Explain about different immune electrophoresis techniques.
20. Explain cross over immune electrophoresis.
21. Discuss about mechanism of agglutination reaction and describe various types of agglutination tests.
22. Explain about haeme-agglutination inhibition reaction.
29. What is Haemagglutination? Explain with suitable example.
30. Brief on Passive agglutination
31. What is Latest agglutination test
32. Describe about Agglutination inhibition:
33. Describe about Antiglobulin Test
34. Discuss about Coombs Test
35. Describe about Indirect Coombs test
36. Describe about Indirect Antiglobulin test
37. Describe about direct Coombs test
38. Describe about direct Antiglobulin test
39. Difference between agglutination and precipitation reaction

2 ½ Marks Question:

1. Describe characteristics of human antigens.
2. Describe biological function of various classes of human antibodies.
3. Give short note on Epitopes and antibody specificity
4. What is Antigenic valence
5. Give short note on Isotypes
6. Give short note on allotypes
7. Give short note on idiotypes.
8. Write short note on adjuvants.
9. Draw structure of IgG.
10. Draw structure of IgM.
11. Draw structure of IgA.
12. Draw structure of IgE.
13. Draw structure of IgD.
14. What is antibody titre?
15. Give short note on Species specific antigen
16. Give short note Auto antigens.
17. Give short note Heterophile
18. What are Exogenous Antigens
19. Give short note on Endogenous antigens:
20. What are Auto-antigens

21. What are T-independent antigens?
22. What are T-dependent antigens
23. Differentiate between T dependent and T independent antigens.
24. What is Complementarily determining region (CDR):
25. Give short note on Hinge region
26. What is Fc region
27. Note on functions of IgG
28. Note on functions of IgM
29. Note on role of IgE
30. What is antigen Specificity
40. What is Cross reactivity of antibody
41. What is Serology
42. Give short note on Serologic reactions
43. Brief on Antibody titre
44. What is Rising antibody titre
45. Describe Paired sera
46. Give short note on Ring test
47. What is Ascoli test
48. Give short note on Slide agglutination test
49. What is VDRL test?
50. What is ELK test?
51. What is Latest agglutination test

1 Marks Question:

1. Define immunogenicity.
2. What is Antigenicity?
3. Define antigens.
4. What are Haptens?
5. What is carrier?
6. What is Complete antigen
7. Define epitope, valence
8. Species specific
9. Define Isoantigen.
10. Give two example of Isoantigen.
11. Define autoantigen.
12. Give two example of autoantigen.
13. What is rheumatoid?
14. What are Organ specific antigens?
15. Give two examples of Organ specific antigens?
16. What is secretory antibody..
17. What is Heterophileantigens?
18. What is hinge region?
19. Define paratope.
20. What is CDR.
21. What is lattice?
22. What is Coomb's serum.
23. What is paired
24. What is role of Fab portion of antibody?
25. What is function of Fc region of antibody in immune reaction.
26. Which antibody pass placenta.
27. What is antigenic receptor on B cell.
28. Which antibody involved in allergy reaction.
29. Define epitopes.
30. Define antigenic valence.

31. Define Immunogen
32. What is Tolerogen
33. Define Allergen
34. What are Mitogens
35. Two example of Super Antigens
36. Sequestered antigens
37. Define Neo-antigens
38. What are Xenoantigens
39. CDR
52. Antibody titre
53. VDRL
54. Antiglobulin

UNIT IV

UNIT IV

10 Marks Question:

1. Describe in detail about ELISA.
2. Discuss Immunofluorescence technique.
3. Describe direct Immunofluorescence technique.
4. Describe in-direct Immunofluorescence technique.
5. Explain about Type-I anaphylactic hypersensitivity reaction.
6. Discuss about Type-II cytotoxic hypersensitivity reaction.
7. Describe Gell and Coomb's classification of hypersensitivity.
8. Explain about mechanism of anaphylaxis.
9. Give mechanism of anaphylaxis.
10. Explain about systemic anaphylaxis.
11. Give short note on hemolytic disease of new born.
12. Describe about prevention of anaphylaxis.
13. Give short note on Blood transfusion reaction
14. What is Rh compatibility?
15. Explain about Arthus reaction.
16. What is serum sickness?
17. Give short note on Mantoux test.
18. What is allergic contact dermatitis?

5 Marks Question:

1. Describe about principle, method and application of direct ELISA.
2. Explain about principle, method and application of indirect ELISA.
3. What is sandwich ELISA explains with suitable example?
4. Write note on competitive ELISA.
5. Discuss about various application of ELISA techniques.
6. Discuss Immunofluorescence technique.
7. Describe direct Immunofluorescence technique.
8. Describe in-direct Immunofluorescence technique.
9. Explain about Type-I anaphylactic hypersensitivity reaction.
10. Discuss about Type-I I cytotoxic hypersensitivity reaction.
11. Differentiate between delayed and immediate hypersensitivity reaction.
12. Explain about mechanism of anaphylaxis.
13. Give mechanism of anaphylaxis.

14. Explain about systemic anaphylaxis.
15. Give short note on hemolytic disease of new born.
16. Describe about prevention of anaphylaxis.
17. Give short note on Blood transfusion reaction
18. What is Rh compatibility?
19. Explain about Arthus reaction.
20. What is serum sickness?
21. Give short note on Mantoux test.

2 ½ Marks Question:

1. What is allergic contact dermatitis
2. Give short note on Blood transfusion reaction
3. What is Rh compatibility?
4. Explain about Arthus reaction.
5. What is serum sickness?
6. Give short note on Mantoux test.
7. What is allergic contact dermatitis?
8. Give short note on Enzymes used in ELISA
9. What are fluorescent dyes.
- 10.

1 Marks Question:

1. Give full form of ELISA
2. Name any two fluorescent dyes.
3. Give any two applications of ELISA.
4. Give any two applications of Immunofluorescence.
5. Give names of any two enzymes used in ELISA.
6. Define hypersensitivity.
7. Define anaphylaxis.
8. Give two examples of immediate hypersensitivity.
9. Give two examples of delayed hypersensitivity.
10. What is atopy?
11. Name any two allergies of Atopy.
12. Which immune cell involve in anaphylactic reaction.
13. What is degranulation..
14. What is serum sickness?
15. What is Arthus reaction?
16. What is drug hypersensitivity?
17. Give short note on treatment of allergic Reaction.

REFERENCES

1. David R. Boone and Richard W. Castenholz, Bergey's manual of systematic bacteriology, second edition, Vol One, Springer, 2005.
2. George A. Wistreich, Max D. Lechtman, Microbiology, Fifth edition, Macmillan Publishing Company, 1988.
3. Jacquelyn G. Black, Microbiology Principles and Explorations, Sixth edition, Wiley International edition, 2005.
4. Prescott, Harley, Klein's, Willey, Sherwood, Woolverton, Microbiology, Seventh edition, McGraw-Hill International edition, 2008.
5. Immunology by Kubey
6. Medical Microbiology by Anantnarayan.

