

D.K.M.COLLEGE FOR WOMEN (AUTONOMOUS), VELLORE-1.

IMMUNOLOGY

SECTION – A (2 Marks)

1. Contribution of Edward Jenner to immunology
2. Mast cells
3. Mitogen
4. Genes that control Kappa (κ) and Lambda (λ) light chain
5. MHC class I
6. Cytokines
7. Latex agglutination
8. Haemagglutination
9. HLA typing
10. Give some examples for autoimmune disease
11. Define prozone
12. Define hapten
13. Define epitope and paratope
14. Define antigenicity and immunogenicity
15. Give the antigen reactivity pattern seen in ODD method
16. What are T cells and give its types.
17. Which cell-surface glycoprotein distinguishes professional antigen presenting cells from other cells and is involved in the co-stimulation of T cells?
18. Define agglutinins and agglutinogens
19. Chemotactic factor that involved in inducing fever
20. What are the granulocytic cells?
21. Variolation
22. Pinocytosis
23. Plasma cells
24. NK cells

25. Hematopoiesis
26. Immune system
27. Humoral immunity
28. Antigen
29. What is ASO?
30. Immunogenicity
31. Agglutinins
32. Fab
33. Immunosuppressive therapy
34. Dendritic cells
35. Transcytosis
36. Secretory immunoglobulin
37. Autoimmune disease
38. HLA antigen?
39. Agglutination inhibition assay?
40. Define CD
41. Differentiate CD4 and CD8
42. What are interleukins?
43. What are the molecules involved in co-stimulatory signals?
44. What is FC region?
45. Who is Lady Mary Wortley?
46. What are the surface antigens for B-cell?
47. Explain ELISA
48. What is RIA?
49. Differentiate primary, secondary and tertiary reactions
50. Give some examples for allergen
51. Define allergen
52. What are antiglobulins?
53. Define serum
54. What is serology?
55. What is Bombay blood group?

56. What is the role of IgE?
57. What is the function of J-chain?
58. Describe the biological functions of Interleukin I (IL 1)
59. What is the difference between a hapten and antigen?
60. Explain immune complex mediated hypersensitivity reactions
61. Describe anti idiotypic antibodies
62. Explain Mixed Lymphocyte Reaction.
63. Explain immunological tolerance
64. Define monoclonal antibody
65. Explain about AIDS
66. What is antigen processing and presentation?
67. What is Gamma interferon?
68. What is CDR?
69. Explain the function of IgG
70. What are the characteristics of innate immunity?
71. What is TCR?
72. What is the role of lysozyme in immunity?
73. What are autoantigens?
74. What are autoantibodies?
75. Define cell mediated immunity
76. What are the cells that participate in cell mediated immunity?
77. Define allergy
78. Define anaphylaxis
79. Define prophylaxis
80. Define opportunistic pathogen
81. Explain endotoxins
82. Explain exotoxins
83. Which condition is called septic shock?
84. What are antibiotics?
85. What are virions?
86. Explain about reverse transcriptase

87. Explain in short about histocompatibility complex
88. Define phagocytosis
89. What are phagocytic cells?
90. Who discovered phagocytic process?
91. What are granulocytes?
92. Define chemotaxis
93. What is the role of integrins and selectins?
94. Define opsonins
95. Explain in short about opsonization
96. What are the enzymes that take part in respiratory burst?
97. Differentiate between monocytes and macrophages
98. What are kupffer cells?
99. What are histiocytes?
100. What are alveolar macrophages
101. What are acute-phase proteins?
102. What are leukotrienes?
103. Explain about TNF- α
104. Define apoptosis
105. Define necrosis
106. What are langerhans cells?
107. What are the molecules produced by macrophages during phagocytosis?
108. What type of antigen participates in agglutination and precipitation reactions?
109. Define immunosuppression
110. Give examples for immunosuppressive agents
111. What are giant cells?
112. What are phagosomes?
113. Define endocytic pathway
114. Define exocytic pathway
115. Define endosomes
116. Define lysosomes

117. Write in short about contact dermatitis
118. Define thymectomy
119. Explain thymocyte
120. Explain bursectomy
121. What are homing receptors?
122. Define addressins
123. What are lymphoblasts?
124. CD4 and CD8 are receptors for which molecules?
125. What are interferons?
126. Define ADCC
127. What are the key cytokines produced by T-helper cells?
128. Define chemokines
129. Define idiotypes
130. Why "O" blood type is considered as universal donor?
131. What is rheumatoid factor?
132. What is alexine?
133. What is MAC?
134. Mannose Binding Proteins
135. What are perforins?
136. FACS
137. Which cells produce antibodies?
138. Define inflammation
139. Define blebbing
140. What are apoptotic factors
141. What are the types of ELISA?
142. What is the principle of ELISA?
143. What is the principle of RIA?
144. Explain radioallergosorbent assay
145. Define abzymes
146. What are super antigens?
147. What are incomplete adjuvants?

148. What are complete adjuvants?
149. What are granulomas?
150. What are the components of TCR?
151. What are proteosomes?
152. What is ubiquitin protein?
153. Vaccines
154. SCID mice
155. Erythroblastosis foetalis
156. Mechanism involved in Graft Rejection
157. Describe systemic autoimmune disorder
158. Rejection of foreign skin graft is an example for?
159. The primary immune response is characterized by?
160. GVHR
161. What are acute phase proteins?
162. Activated macrophages can kill intracellular organism by producing?
163. Bacteria can be cleared from the bloodstream by what type of cells?
164. What is the role of suppressor T cells?
165. Describe anti idiotypic antibodies
166. Describe the biological functions of Interleukin I (IL 1)

SECTION-B (5 MARKS)

1. How does the immune system fight disease?
2. Give short notes on professional antigen presenting cells
3. Write about the contribution of any two scientists to immunology
4. Describe the processes, cells and molecules involved in the inflammatory process
5. Write short notes on thymus
6. RIA
7. ELISA
8. Adjuvants
9. Basic structure of immunoglobulin

10. Properties of antigen
11. Explain in short about active and passive immunity
12. Write short notes on spleen
13. Explain in brief about structure of MHC molecule
14. Give short notes on complement classical pathway
15. Immune system in health and disease
16. Write short notes on synthetic vaccines
17. Write short notes on bone marrow
18. Give short notes on any one of complement system pathway
19. Explain in short about the molecules of complement system
20. Write in short about autoimmune diseases
21. Write briefly about the granulocytic cells
22. What are the characteristic of antibodies?
23. Write in short about the membrane attack molecules
24. Explain about the properties of adjuvant
25. How bacteria cause disease?
26. Explain about the replication cycle of retroviruses
27. Write in short about the history of immunology
28. What are Complements? How are they involved in the defense mechanism?
29. What is the role of macrophage in wound healing?
30. How tumor escapes from the host immune system?
31. NK cells their biological significance, receptors, function
32. Inflammation – relevant cells and mediators

SECTION-C (10 Marks)

1. Describe the processes, cells and molecules involved in cell-mediated immunity
2. Explain in detail about innate immunity
3. Write in detail about hemagglutination, ABO blood grouping, antigens found in RBC's and antibodies that found in serum

4. Describe in detail about immunodiffusion and electroimmunodiffusion methods
5. Describe in detail about types of immunoglobulins (Ig's)
6. Describe in detail about effector mechanism of immune response
7. Explain in detail about B cells and T cells
8. Explain in detail about macrophages
9. Explain in detail about antibody types and functions
10. Write detailed notes on cytosolic pathway of MHC I
11. Write detailed notes on hypersensitivity reactions
12. Explain in detail about monoclonal antibody production
13. Describe in detail about secondary binding test
14. Describe in detail about primary binding test
15. Give detailed notes about the role of MHC molecule in antigen processing and presentation
16. Explain about the MHC gene
17. Write in detail about the surface markers of B cell and T cell
18. Explain in detail about the mononuclear phagocytic cell
19. Explain in detail about the function of neutrophils in eliminating the infection
20. Explain about the bacterial agglutination reactions
21. Explain about the immunoglobulin class switching
22. What are the consequences of complement activation?
23. Explain about the steps involved in inflammatory response
24. Explain about the immunosuppressive therapy
25. Explain the process of B – cell maturation, activation & differentiation
26. Macrophages are secretory cells. Explain
27. Immune system – structure and function, innate and acquired immunity, active and passive immunity
28. Describe the structure, characteristics and functions of IgG
29. Describe the structure, characteristics and functions of IgA
30. Describe the structure and function of the thymus and spleen

31. How is IgA secreted across mucosal surfaces?
32. Explain in detail about transplantation immunology
33. Describe about HLA typing
34. Explain about the systemic autoimmune disease
35. Explain about the organ specific autoimmune disease
