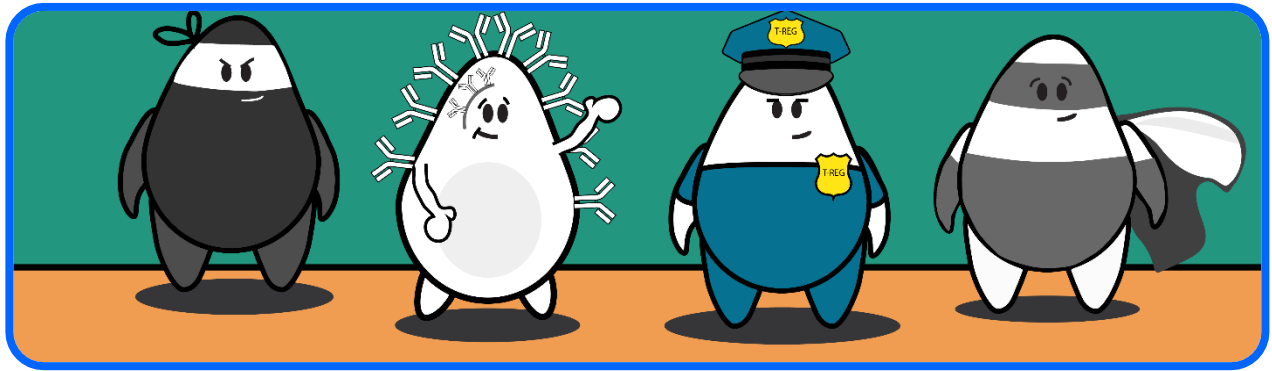




IMMUNOLOGY

MCQ

Part 2



A

Cell mediated immunity

1. Regarding helper T cells, all of the following statements are true EXCEPT:

- a. They activate macrophages.
- b. They activate B cells.
- c. They lyse target cells.
- d. They recognize antigen presented by class II MHC molecules.
- e. They have CD4 molecules on their cell surface.

2. Dendritic cells are involved in:

- a- Transporting the epitope to the surface of a B cell
- b- Suppressing the immune system
- c- Destroying target cells
- d- Presenting peptides to naive T cells
- e- Producing antibody

3. Extracellular bacteria are presented:

- a- With MHC I to CD4 Th cells
- b- With MHC I to CD8 Tc cells
- c- With MHC II to B cells
- d- With MHC II to CD4 Th cells
- e- With MHC II to CD8 cells

4. Which statement about super-antigens is INCORRECT?

- a- They bind directly to MHC II molecule outside the peptide binding cleft.
- b- They result in the release of huge amounts of cytokines.
- c- They result in stimulation of the normal acquired immune response.
- d- They bind to the variable portion of the B chain of the TCR.
- e- Unlike ordinary antigens, they are not processed in APCs.

5. Cytotoxic T cells exert their killing by:

- a. Antibodies with specific recognition capabilities
- b. Inserting the complement components into target cell membrane
- c. T cell antigen receptors and MHC protein
- d. Inserting a pore-forming protein called perforin into target cell membrane
- e. Activation of macrophages

6. The antigen specificity of an adaptive immune response is due to:

- a) Activation of antigen specific lymphocytes
- b) Folding of antibody to fit the pathogen
- c) Lyses of only certain pathogens by neutrophils
- d) Phagocytosis of only certain pathogen by macrophage

7. Which describes acquired immunity:

- a) Increase in CRP
- b) Presence of NK cells
- c) Complement cascade
- d) Maternal transfer of antibody

8. B7 on APCs bind to:

- a) CD40
- b) CD40-L
- c) CD28
- d) CD2

9. Regarding super-antigens, all of the following are true except:

- a) Causes non-specific activation of T-cells
- b) Causes toxic shock syndrome
- c) Interact with MHC molecule outside the ABG
- d) Bind to the Alpha chain of TCR only

10. Secreted by fully activated T helper cells for stimulation of their survival and proliferation:

- a) IL1
- b) IL2
- c) IL12
- d) TNF

11. Th1 cells activates macrophages Via:

- a) IFN- γ
- b) TNF
- c) IL2
- d) IL10

12. All of the following are mechanisms of killing by CTLs except:

- a) Perforin
- b) FAS-L
- c) Degradative enzymes
- d) Granzymes

13. What is the primary role of T cells?

- a) Production of antibodies
- b) Destruction of intracellular pathogens
- c) Destruction of extracellular pathogens
- d) Production of red blood cells

14. Which type of molecule must present antigens to T cells?

- a) MHC molecules
- b) CD3 molecules
- c) B7 molecules
- d) Fas molecules

15. What are naive T cells?

- a) T cells that have encountered antigens
- b) T cells that have not encountered antigens
- c) B cells
- d) Natural killer cells

16. What structure on T cells recognizes antigens?

- a) CD4
- b) TCR (T cell receptor)
- c) MHC molecule
- d) CD8

17. Which class of MHC molecules is present on all nucleated cells?

- a) Class I MHC
- b) Class II MHC
- c) CD28
- d) Fas-L

18. CD4 T cells are also called:

- a) Cytotoxic T cells
- b) Helper T cells
- c) Regulatory T cells
- d) Memory T cells

19. What is the main function of CD8 T cells?

- a) Help other immune cells
- b) Kill infected or abnormal cells
- c) Secrete cytokines
- d) Present antigens

- 20. What molecule helps TCR transmit signals inside the T cell?**
- a) CD4
 - b) CD3
 - c) CD8
 - d) CD28
- 21. Which cell type is the most efficient antigen-presenting cell (APC)?**
- a) Macrophages
 - b) Dendritic cells
 - c) B cells
 - d) T cells
- 22. What are MHC molecules also known as?**
- a) CD8 antigens
 - b) Human leukocyte antigens (HLA)
 - c) CD4 receptors
 - d) Fas molecules
- 23. Which type of cells express both MHC I and MHC II molecules?**
- a) All nucleated cells
 - b) Dendritic cells
 - c) Red blood cells
 - d) Cytotoxic T cells
- 24. What type of cells are activated by peptides presented on MHC II molecules?**
- a) CD4 T cells
 - b) CD8 T cells
 - c) B cells
 - d) NK cells
- 25. What type of immune response is primarily mediated by T cells?**
- a) Humoral immunity
 - b) Cell-mediated immunity
 - c) Innate immunity
 - d) Allergic reaction
- 26. What type of T cell is classified by expressing CD8 on its surface?**
- a) Helper T cells
 - b) Cytotoxic T cells
 - c) Regulatory T cells
 - d) Natural killer cells

27. Which cytokine helps with the proliferation of T cells?

- a) IL-2
- b) IL-4
- c) IFN- γ
- d) TNF- α

28. Which molecule acts as a co-stimulatory molecule for T cells?

- a) CD28
- b) CD40
- c) CD3
- d) Fas-L

29. Endogenous antigens are presented on which class of MHC molecules?

- a) MHC I
- b) MHC II
- c) CD4
- d) CD8

30. What is the primary result of superantigen exposure?

- a) T cell proliferation
- b) Cytokine overproduction
- c) Antigen presentation
- d) Memory cell formation

31. What is the function of perforin released by Tc cells?

- a) Create pores in target cell membranes
- b) Activate cytokine production
- c) Inhibit immune responses
- d) Bind to MHC II molecules

32. Which molecule is involved in apoptosis induced by Tc cells?

- a) CD3
- b) FAS
- c) B7
- d) CD28

33. The binding of FAS and FAS-L is critical for which function?

- a) T cell activation
- b) Killing of target cells
- c) B cell maturation
- d) Antigen recognition

34. Which type of immune response is primarily regulated by Th1 cells?

- a) Humoral immune response
- b) Cell-mediated immune response
- c) Allergic reactions
- d) Autoimmune reactions

35. What is the function of granzymes in cytotoxic T cells?

- a) Inducing apoptosis in target cells
- b) Binding to MHC molecules
- c) Activating B cells
- d) Producing cytokines

36. What distinguishes effector T cells from naive T cells?

- a) Effector T cells have encountered antigens and are functionally active
- b) Effector T cells cannot recognize antigens
- c) Effector T cells do not need MHC molecules
- d) Effector T cells are only found in the bone marrow

37. Which of the following best describes the function of memory T cells?

- a) To provide a faster and stronger response to previously encountered antigens
- b) To activate naive T cells
- c) To induce apoptosis in infected cells
- d) To suppress immune responses

38. What is the role of IFN- γ in cell-mediated immunity?

- a) Activates macrophages
- b) Promotes B cell activation
- c) Suppresses immune responses
- d) Induces T cell apoptosis

39. Which type of antigen presentation leads to activation of CD4+ helper T cells?

- a) Presentation by MHC II molecules
- b) Presentation by MHC I molecules
- c) Antibody-dependent presentation
- d) Cross-presentation

40. Characteristics of adaptive immunity include all of the following except:

- a) Induction
- b) Specificity
- c) Memory
- d) Phagocytosis

41. T regulatory cells secretes:

- a) IFN-alpha
- b) IFN-gamma
- c) TGF-beta
- d) TNF-beta

42. Regarding super-antigens, all of the following are true except:

- a) Causes non-specific activation of T-cells
- b) Causes toxic shock syndrome
- c) Interact with MHC molecule outside the ABG
- d) Bind to the Alpha chain of TCR only

Immunoglobulins and Humoral immunity

43. Thymus independent (TI) antigens:

- a) Can stimulate B cells through T cell help
- b) Do not produce memory cells
- c) Can stimulate immunoglobulin class switching
- d) Can only induce the production of IgG
- e) Are usually protein in nature

44. The portion of the antibody molecule that binds antigenic epitopes is:

- a) Termed the determinant
- b) Composed of variable and constant regions of Ig heavy and Ig light chains
- c) Composed of the variable regions of Ig heavy and Ig light chains
- d) The Fc fragment
- e) Two Ig light chains

45. IgM:

- a) Can cross the placenta
- b) Has many J chain
- c) Is the predominant antibody in the secondary immune response
- d) Indicates immunity when present in the newborn
- e) Is the only immunoglobulin to thymus independent antigens

46. IgE:

- a) Is usually present as a dimer
- b) Is present in large amounts in serum
- c) Is present as B cell receptor on B cells
- d) Can attach to receptors on mast cells
- e) Can cross the placenta

47. Immunoglobulin class switching is mediated by a change in:

- a) Constant domains of heavy chains
- b) Constant domains of light chains
- c) Variable domain of heavy chain
- d) Variable domain of light chain
- e) Constant domains of both heavy and light chains

48. Regarding the primary immune response:

- a) There is a very short induction (lag) period.
- b) Immunoglobulins produced are mainly of IgM class.
- c) Memory cells are the main effector cells
- d) The induced antibody level is very high.
- e) it is the first response of innate immunity.

49. Allergy symptoms are produced when antigen binds to IgE on:

- a) Macrophage
- b) Mast cell
- c) Neutrophil
- d) Th1

50. IgE

- a) Is bound together by J chain
- b) Binds to mast cells through its Fab region
- c) Differs from IgG antibody because of its H chains
- d) Present in high concentration in serum
- e) Only found as a pentamer

51. IgA

- a) Crosses the placenta
- b) Involved in hay fever
- c) Activates complement
- d) Present in milk and saliva

52. Immunoglobulins are synthesized by:

- a) Macrophage
- b) Plasma cells
- c) T-lymphocytes
- d) NK cells
- e) Neutrophils

53. The antibody class that protects the mucous membrane:

- a) IgA
- b) IgD
- c) IgM
- d) IgE
- e) IgG

54. Composed of 5 monomers:

- a) IgA
- b) IgD
- c) IgM
- d) IgE
- e) IgG

55. Has a relationship with mast cells:

- a) IgA
- b) IgD
- c) IgM
- d) IgE
- e) IgG

56. IgD

- a) Pentameric
- b) Present mainly as surface receptor on B cells
- c) Abundant in milk
- d) Resistance to proteolytic enzymes

57. The following are not true about the FC regions of an immunoglobulins:

- a) Responsible for antibody binding
- b) Involved in mast cell binding
- c) Involving in the activation of the complement cascade
- d) Determine the ability of Ig for transplacental transfer.

58. The Ig with the lower percentage in serum is:

- a) IgE
- b) IgG
- c) IgM
- d) IgA

59. Antibodies are:

- a) Proteins
- b) Glycoproteins
- c) Phospholipids
- d) None of the above

60. Ig which cannot activate complement:

- a) IgM
- b) IgE
- c) IgA
- d) IgG
- e) B & C

61. Igs on the surface of B-Cells:

- a) IgM
- b) IgG
- c) IgD
- d) A & C

62. Digestion of an immunoglobulin molecule by the enzyme papain produces:

- a) Two heavy and two light chains
- b) One Fab and one Fc
- c) Two Fab and one Fc
- d) One Fab and two Fc
- e) Two Fab and two Fc

63. Plasma cells are the end cells of:

- a) T-cells
- b) Killer cells
- c) B-cells
- d) Nk-cells

64. All the antibodies produced from a B-cell are having:

- a) Similar specificity
- b) Similar size
- c) Different specificities
- d) None of these

65. The major immunoglobulin present in the human serum is:

- a) IgG
- b) IgE
- c) IgA
- d) IgG

66. Typical antibody molecule has all of the following characteristics EXCEPT:

- a) it consists of at least two identical heavy and two identical light chains.
- b) it has at least two antigen-binding sites.
- c) it has only one specificity for antigen.
- d) it has two constant domains on each of the heavy chains.

67. Which of the following statements regarding IgA is NOT TRUE?

- a) Monomer or dimer.
- b) IgA is in saliva.
- c) IgA can be destroyed by bacterial proteases
- d) IgA is absent in colostrum

68. Which of the following is the immunoglobulin that is initially seen on the primary immune response? It is present as a monomer on B cell surfaces but as a pentamer in serum.

- a) IgG
- b) IgE
- c) IgM
- d) IgD

69. Which immunoglobulin mediates immediate hypersensitivity and is involved in immune response to parasitic infections?

- a) IgG
- b) IgE
- c) IgM
- d) IgA

70. Which immunoglobulin is the primary antibody in saliva, tears, and intestinal and genital secretions?

- a) IgG
- b) IgE
- c) IgM
- d) IgA

71. Which immunoglobulin is the predominant antibody in the secondary immune response? It has four subclasses.

- a) IgG
- b) IgE
- c) IgM
- d) IgD

72. The 1st antibodies produced in 1ry response are:

- a) IgM
- b) IgG
- c) IgA
- d) IgE

73. The main antibodies in 2ry response are:

- a) IgE
- b) IgG
- c) IgM
- d) IgA

74. Immunoglobulin class switching:

- a) Occur in the primary immune response
- b) The specificity of antibody is changed
- c) The effector functions of antibody remain the same
- d) The immunoglobulin isotype is changed

75. Isotype is determined by:

- a) Antigen specificity
- b) H chain constant region
- c) L chain constant region
- d) Number of VH domains

76. Response to T-independent antigens lack the following:

- a) Memory
- b) Plasma cells stimulation
- c) B-cell activation
- d) Antigenicity

77. B cells can be involved in all of the following processes EXCEPT

- a) Antigen processing and presentation.
- b) Production and release of interferon- γ .
- c) Maturation to plasma cells.
- d) Expression of class I histocompatibility antigens on the cell surface

78. Which type of pathogen does the humoral immune response primarily target?

- A) Intracellular bacteria
- B) Extracellular bacteria
- C) Viruses
- D) Fungi

79. Which immunoglobulin can cross the placental barrier to provide passive immunity to the fetus?

- A) IgA
- B) IgM
- C) IgG
- D) IgE

80. Which antibody isotype is primarily found in mucosal secretions?

- A) IgG
- B) IgM
- C) IgA
- D) IgD

81. During a primary immune response, which immunoglobulin is produced first?

- A) IgG
- B) IgA
- C) IgM
- D) IgE

82. What type of hypersensitivity reaction involves IgE and mast cells?
A) Type I
B) Type II
C) Type III
D) Type IV
83. What is the primary immunoglobulin found in the colostrum of nursing mothers?
A) IgG
B) IgA
C) IgM
D) IgE
84. What is the result of proteolytic cleavage of an antibody molecule?
A) Two Fab fragments and one Fc fragment
B) Two Fc fragments and one Fab fragment
C) Two variable regions and one constant region
D) Two light chains and two heavy chains
85. Which fragment of an antibody is responsible for antigen binding?
A) Fc fragment
B) Fab fragment
C) Constant region
D) Hinge region
86. What is the primary site of B cell maturation in humans?
A) Thymus
B) Bone marrow
C) Spleen
D) Lymph nodes
87. Which immunoglobulin isotype is most effective at opsonization?
A) IgG
B) IgA
C) IgM
D) IgE
88. Which of the following molecules is not typically expressed by naïve B cells?
A) IgM
B) IgD
C) CD40
D) CD138

89. Which isotype of immunoglobulin is most commonly associated with mucosal immunity?
- A) IgG
 - B) IgM
 - C) IgA
 - D) IgD
90. Which structural region of an antibody determines its antigen specificity?
- A) Constant region
 - B) Variable region
 - C) Hinge region
 - D) Fc region
91. Which B cell subset is involved in the rapid production of antibodies during a secondary immune response?
- A) Memory B cells
 - B) Naïve B cells
 - C) Plasma cells
 - D) Marginal zone B cells
92. Which type of immunity is primarily mediated by B cells?
- A) Cellular immunity
 - B) Innate immunity
 - C) Humoral immunity
 - D) Passive immunity
93. The strength of binding between an antibody and a single epitope is called :
- a- Avidity
 - b- Affinity
 - c- Affinity maturation
 - d- Paratope
94. An antibody Fab contains all the following except:
- a- The paratope
 - b- VH & CH1
 - c- Entire light chain
 - d- none of the above

95. Isotype is determined by:

- a- Antigen specificity
- b- H chain constant region
- c- L chain constant region
- d- Number of VH domains

96. The Fab portion of IgG

- a- Binds to an FC receptor
- b- Contains the J chain
- c- Contain the idiotype of the IgG
- d- Activate complement

97. Immunoglobulins are synthesized by:

- a- Macrophage
- b- Plasma cells
- c- T-lymphocytes
- d- NK cells
- e- Neutrophils

98. The antibody class that protects the mucous membrane

- a- IgA
- b- IgD
- c- IgM
- d- IgE
- e- IgG

99. Antibody preparation consist on one class ,one type, one specificity :

- a- Monotype
- b- Monobody
- c- Monoclonal
- d- Polyclonal

100. Hybridoma technique is used for:

- A- Monoclonal antibodies
- B- Polyclonal antibodies
- C- Both a & B
- D- None of the above

101. T dependent antigens are:

- a- Protein in nature
- b- Lipopolysaccharide
- c- Lipid in nature
- d- Microbial flagella

102. Complement fixation can be mediated by

- a- IgM and IgG
- b- IgG and IgA
- c- IgM and IgD
- d- IgA and IgE

Complement system

103. In the complement system:

- a) The alternative pathway involves the nine components (C1-C9).
- b) The alternative pathway is activated by mannose-binding lectin.
- c) The classical pathway is best activated by bacterial endotoxin.
- d) The membrane attack complex is made of C5b-C9.
- e) The early steps in complement activation are similar in the 3 pathways.

104. All of the following are functions of activated complement EXCEPT:

- a) Bacterial lysis
- b) Opsonization
- c) Interference with viral replication
- d) Chemotaxis
- e) Immune complex clearance

105. The complement component which attaches to the Fc portion of IgM is:

- a) C3b
- b) C3b
- c) C5a
- d) C5b
- e) C1

- 106. Which of the following components is a potent neutrophil chemotactic agent?**
- a) C1
 - b) C5a
 - c) C2
 - d) C789 complex
- 107. Which of the following complement components is most closely related to anaphylatoxins?**
- a) C5b
 - b) C1qrs
 - c) C3a
 - d) C4b2a
- 108. Which of the following complement components attaches to the crystallizable fragment of immunoglobulin M?**
- a) C5b
 - b) C4b2a
 - c) C5a
 - d) C2b
 - e) C1qrs
- 109. The major role of the complement system is to work in conjunction with:**
- a) Antibodies to lyse cells via the perforin molecules.
 - b) The major histocompatibility complex for cell recognition.
 - c) Antibodies to opsonize cells.
 - d) The T-cell receptor for production of lymphokines.
- 110. C3 is cleaved to form C3a and C3b by C3 convertase. C3b is involved in all of the following EXCEPT:**
- a) Altering vascular permeability.
 - b) Promoting phagocytosis.
 - c) Forming alternative-pathway C3 convertase.
 - d) Forming C5 convertase.
- 111. C3a and C5a can cause:**
- a) bacterial lysis.
 - b) Increased vascular permeability.
 - c) phagocytosis of IgE-coated bacteria.
 - d) aggregation of C4 and C2.

112. Complement fixation refers to:

- a) the ingestion of C3b-coated bacteria by macrophages.
- b) the destruction of complement by heating at 56°C for 30 minutes.
- c) the binding of complement components by antigen-antibody complexes.
- d) the interaction of C3b with mast cells.

113. The classic complement pathway is initiated by interaction of C1 with:

- a) antigen.
- b) antigen-IgG complexes.
- c) antigen-IgE complex.
- d) Bacterial lipopolysaccharide

114. Which one of the following is true regarding the alternative complement pathway?

- a) It can be triggered by infectious agents in absence of antibody.
- b) It does not require C1, C2, or C4.
- c) It cannot be initiated unless C3b fragments are already present.
- d) It has the same terminal sequence of events as the classic pathway
- e) all of the above.

115. Complement can enhance phagocytosis because of the presence of receptors on macrophages and neutrophils for:

- a) Factor D.
- b) C6.
- c) C3b.
- d) Properdin

116. The classical pathway is initiated by:

- a) Foreign polysaccharide
- b) C5-C9
- c) Ag-Ab
- d) Phagocytes factors

117. C3b

- a) Chemotactic
- b) Anaphylatoxin
- c) Opsonize bacteria
- d) Inactive form of C3

118. MAC:

- a) C3b, Bb
- b) Properdin
- c) C3, C4, C5
- d) C5b,6,7,8,9

119. Opsonization result in an increase in:

- a) Phagocytosis
- b) Inflammation
- c) Lyses of bacteria
- d) Antibody mediated cytotoxicity

120. The order of action of complement factors in classical pathway:

- a) C1, C2, C3, C4
- b) C2, C1, C4, C3
- c) C1, C4, C2, C3
- d) C4, C2, C1, C3

121. Alternative pathway can bypass:

- a) C1, C2, C3
- b) C3
- c) C2, C3, C4
- d) C1, C2, C4

122. Initiated by Ag-Ab complex:

- a) Classical pathway
- b) Alternative pathway
- c) Lectin pathway
- d) All of the above

123. Initiated by MBL binding with mannose:

- a) Classical pathway
- b) Alternative pathway
- c) Lectin pathway
- d) All of the above

124. Where are complement proteins mainly produced?

- A) Kidneys
- B) Lungs
- C) Liver
- D) Heart

125. Which pathway is triggered by antibodies?
A) Classical pathway
B) Lectin pathway
C) Alternative pathway
D) Regulatory pathway
126. Which complement components form the membrane attack complex (MAC)?
A) C1, C2, C3, C4
B) C5b, C6, C7, C8, C9
C) C3b, C4, C5
D) C1, C4, C6, C9
127. What do the by-products C3a and C5a do during complement activation?
A) Inhibit inflammation
B) Degranulate mast cells and recruit phagocytes
C) Promote antibody production
D) Destroy complement proteins
128. Which complement factors are involved in the alternative pathway but not in the classical pathway?
A) C1, C2, C4
B) C3, C5, C6
C) Factor B, Factor D, Properdin
D) C8, C9, MBL
129. Which pathway is considered part of the innate immune response?
A) Classical pathway
B) Lectin pathway
C) Alternative pathway
D) Both B and C
130. How does the alternative pathway differ from the classical and lectin pathways?
A) It involves antibody binding.
B) It is activated by mannose-binding lectin.
C) It involves spontaneous cleavage of C3.
D) It is triggered by antigen-antibody complexes.

- 131. What does the interaction of C5b with C6, C7, C8, and C9 result in?**
A) Formation of the MAC
B) Activation of C3
C) Degradation of C2
D) Inhibition of C1
- 132. What is the function of the complement component C3b in opsonization?**
A) It binds to antibodies.
B) It marks pathogens for phagocytosis
C) It deactivates C1.
D) It forms the membrane attack complex.
- 133. Which complement pathway involves factor B and properdin?**
A) Classical pathway
B) Lectin pathway
C) Alternative pathway
D) Regulatory pathway
- 134. Which complement component is NOT involved in the alternative pathway?**
A) C3
B) C4
C) Factor B
D) Properdin
- 135. Which of the following pathways of complement activation does not require C1?**
A) Classical pathway
B) Lectin pathway
C) Alternative pathway
D) Both B and C
- 136. Which complement component is crucial for the late steps of complement activation in all pathways?**
A) C4
B) C5
C) C1
D) C2

137. The alternative pathway of complement activation

- a- Occurs after the classic pathway activation
- b- Occurs if only the classical pathway is ineffective in pathogen clearance
- c- Require C3
- d- Require C4

138. Which is composed of 3 separate proteins :

- a- C1
- b- C2
- c- C3
- d- C4
- e- C5

139. C3 Convertase:

- A- C5b
- B- C5a
- C- C1qrs
- D- C4b2a

140. C5a:

- A- Chemotactic agent
- B- T-cell activator
- C- RBCs surface receptor
- D- Mast cell activator

Answers

1. C	9. D	17.A	25.B
2. D	10.B	18.B	26.B
3. D	11.A	19.B	27.A
4. C	12.C	20.B	28.A
5. D	13.B	21.B	29.A
6. A	14.A	22.B	30.B
7. D	15.B	23.B	31.A
8. C	16.B	24.A	32.B

33.B	69.B	105. E
34.B	70.D	106. B
35.A	71.A	107. C
36.A	72.A	108. E
37.A	73.B	109. C
38.A	74.D	110. A
39.A	75.B	111. B
40.D	76.A	112. C
41.C	77.B	113. B
42.D	78.B	114. E
43.B	79.C	115. C
44.C	80.C	116. C
45.E	81.C	117. C
46.D	82.A	118. D
47.A	83.B	119. A
48.B	84.A	120. C
49.B	85.B	121. D
50.C	86.B	122. A
51.D	87.A	123. C
52.B	88.D	124. C
53.A	89.C	125. A
54.C	90.B	126. B
55.D	91.A	127. B
56.B	92.C	128. C
57.A	93.B	129. D
58.A	94.D	130. C
59.B	95.B	131. A
60.E	96.C	132. B
61.D	97.B	133. C
62.C	98.A	134. B
63.C	99.C	135. D
64.A	100. A	136. B
65.A	101. A	137. C
66.D	102. A	138. A
67.D	103. D	139. D
68.C	104. C	140. A