

Weeeko 5

1) Antigens from which one of the following microbes would be presented on MHC class I molecules by macrophages?

(Lippincott Q & A)

- (A) *Ascaris lumbricoides*
- (B) *Candida albicans*
- (C) *Haemophilus influenzae*
- (D) Influenza virus
- (E) *Streptococcus pneumoniae*

2) A person develops a viral infection and both T and B cells become activated to fight the infection. In which way is antigen recognition by B cells different from antigen recognition by T cells?

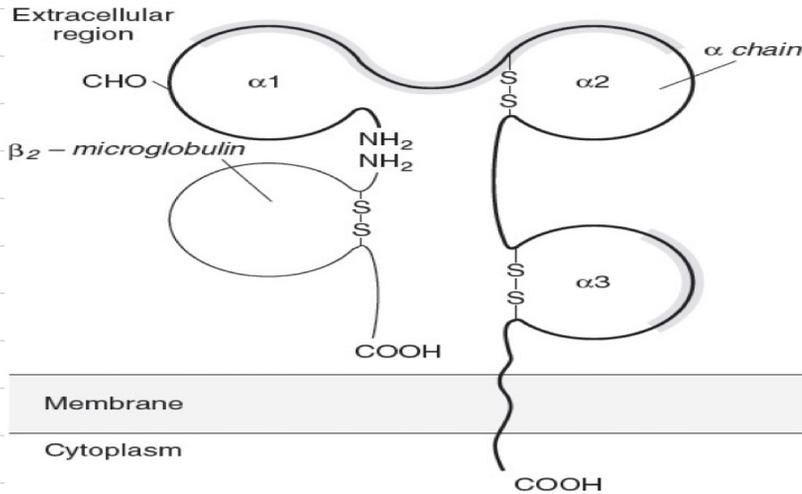
(Lippincott Q & A)

- (A) B cells home to the paracortex of lymph nodes where they recognize the antigens trapped by helper T cells
- (B) B cells recognize the antigens that have been processed and presented by follicular dendritic cells
- (C) B cells undergo receptor editing to change receptors that fail to bind to an antigen
- (D) B cells utilize membrane immunoglobulin molecules to bind to antigen in its natural state
- (E) The antigen receptors on a single B cell have a broad specificity and are able to recognize several chemically unrelated antigens

- 3) The person in the above question is experiencing a primary infection with the virus. B cells activated in a primary infection secrete which class of antibody first? ([Lippincott Q & A](#))
(A) IgA (B) IgD (C) IgE (D) IgG (E) IgM
- 4) The viral infection in the above question began in the respiratory tract. Which antibody class would best protect respiratory epithelial cells from viral infection? ([Lippincott Q & A](#))
(A) IgA (B) IgD (C) IgE (D) IgG (E) IgM
- 5) The virus in the above question spreads from the respiratory tract and causes viremia. Which antibody class would be most important in fighting the virus as it spreads through the body?
(A) IgA (B) IgD (C) IgE (D) IgG (E) IgM ([Lippincott Q & A](#))
- 6) Antigen receptors on T and B cells share which similar feature?
(A) Affinity maturation occurs following antigen recognition for both receptor types
(B) Interaction with MHC molecules is required for antigen recognition by both receptor types
(C) The constant regions of both receptor types are identical
(D) The specificity of both receptor types is determined following exposure of mature cells to antigen
(E) The variable portions of both receptor types are generated by random recombination of genes

([Lippincott Q & A](#))

7) Which of the following statements best applies to the following diagram? (pretest microbiology & immunology)



- a. Depicts the cell-membrane MHC product associated with narcolepsy
- b. Essential for the transplacental passage of antibody
- c. Found on T and B lymphocytes and all nucleated cells
- d. Present on macrophages but not neutrophils
- e. Represents the secretory component associated with IgA
- f. Required for recognition of processed antigen by TH1 and TH2 lymphocytes

8) 19-year-old college student develops a rash. She works part-time in a pediatric AIDS clinic. Her blood is drawn and tested for specific antibody to the chicken pox virus (varicella-zoster). Which of the following antibody classes would you expect to find if she is immune to chicken pox?

(pretest microbiology & immunology)

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

- 9) The complement system plays a key role in the host defense process. Which of the following components of this system is the most important in chemotaxis? (Test that memory)
(pretest microbiology & immunology)
- a. C1q b. C3a c. C3b d. C4a e. C5a

- 10) The T-cell antigenic receptor (pretest microbiology & immunology)
- (A) Is a monomeric IgM molecule
(B) Is a monomeric IgG molecule
(C) Will respond only to epitopes processed class I HLA molecules
(D) Does not interact directly with circulating antigens

Q1	Q2	Q3	Q4	Q5
D	D	E	A	D
Q6	Q7	Q8	Q9	Q10
E	C	A	E	D