

EXAM EXPECTATIONS

MYP Biology

“Common Challenges- Defense”

STATE lysozymes protect the eye and respiratory tract from infections
DEFINE cryptic coloration, aposematic coloration
DEFINE mycorrhizae, lichens
DEFINE canavanine
DEFINE interleukins
DEFINE acquisition, proliferation, conjunction, volatile, dilation, permeability, edema, lyses
DEFINE macrophage, phagocytic cells, effector cells
DEFINE lignin
DEFINE apoptosis
DEFINE lysozymes
LIST the main sequence of events in the inflammatory response
LIST physical barriers against microbes
LIST the main sequence of events in the primary immune response
IDENTIFY cell type(s) that starts secondary immune responses
IDENTIFY ways in which animals defend themselves against predators
IDENTIFY ways in plants defend themselves against herbivores
IDENTIFY defenses that are innate
IDENTIFY 5-6 structures and 1-2 functions of the lymphatic system
IDENTIFY an example of *Mullerian* mimicry
IDENTIFY a given response as a taxis or tropism
IDENTIFY the three potential barriers found in bacteria and place them in order from inside to outside
IDENTIFY an immune response from a list that would result in long term immunity
IDENTIFY an example of antigenic variation from a list of pathogen descriptions
OUTLINE the functions of bacterial: endospores, capsules, flagella
OUTLINE the role of histamine
OUTLINE the role of nicotine and strychnine in plants
OUTLINE the chemical response to herbivory
OUTLINE the role of antibiotics
OUTLINE the role of peptidoglycan
OUTLINE the role of the complement system
OUTLINE the clonal selection theory
OUTLINE how fungi defend themselves against bacterial threats
OUTLINE natural passive immunity
OUTLINE the antihistamines
OUTLINE latency in the herpes virus
ANALYZE / EXPLAIN a graph on primary and secondary immune responses
DESCRIBE the primary immune response
DESCRIBE helper T cells
COMPARE the structure and function of bacterial cell walls and cell walls found in plants / fungi
COMPARE gram negative and gram positive bacteria
COMPARE active and passive immunity (identify 2 similarities and differences)
COMPARE *Mullerian* and *Batesian* mimicry
COMPARE antigens and antibodies
COMPARE taxis and tropisms
COMPARE humoral and cell mediated immune pathways
COMPARE the role of chemokines, interferons and histamines
COMPARE the response of T cells and B cells to pathogens
EXPLAIN why we feel sick for days after exposure to a new pathogen such as a virus
EXPLAIN how “*Jenner*” successfully used the cowpox virus as a vaccine
EXPLAIN the mechanism of vaccines in general

EVALUATE / EXPLAIN a blood transfusion of two blood types and its success or failure

DISCUSS the overuse of antibiotics

SUGGEST reasons for “alarm calls” in *Belding’s* ground squirrels

SUGGEST which type of bacteria would be most vulnerable to penicillin

SUGGEST the reasons for “eye-spots” on butterfly wings