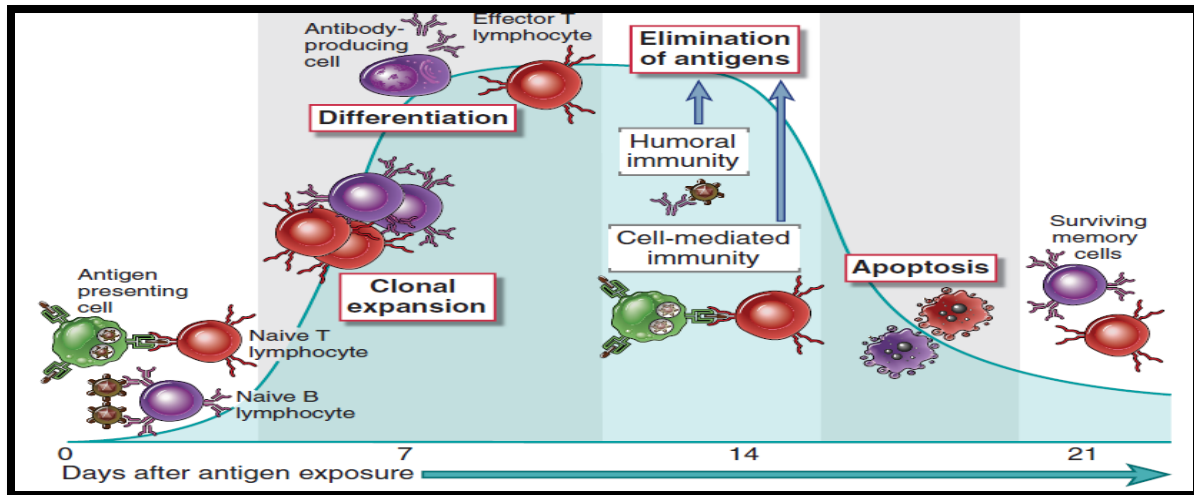


Birla Institute of Technology & Science, Pilani

1st Semester 2022-23

Mid Semester Examinations
Molecular Immunology (BIO G 514)

Marks: 30 | Time: 1 ½ Hours



- 1) Based on your understanding of the figure given above, detail the critical features of the adaptive immune response. (3)
- 2) Write short notes on
 - a) Neutrophils
 - b) Allotypes
 - c) Neoantigenic determinants(3)
- 3) Based on your understanding of the molecular interactions in the lymphnodes, explain the possible observations in the case of a) CXCR5 knockout and b) CCR7 knockout mice (5)
- 4) Briefly mention the critical steps involved in leucocyte migration into tissues. Use diagrams if necessary. (4)
- 5) Explain: (4)
 - a) Necessity of the hinge region in antibodies
 - b) Affinity and Avidity
- 6) . Draw the pathways involved in transcription of NF-KB transcription factor on the recognition of the appropriate ligand by TLR1. (5)
- 7) What could be the consequences in T cell antigen presentation if HLA DM underwent a loss of function mutation (6)

Best of Luck