

**PSG COLLEGE OF ARTS & SCIENCE**  
(AUTONOMOUS)

**MSc DEGREE EXAMINATION DECEMBER 2018**  
(First Semester)

Branch - **BIOTECHNOLOGY**

**IMMUNOTECHNOLOGY**

Time: Three Hours

Maximum: 75 Marks

Answer **ALL** questions  
**ALL** questions carry **EQUAL** marks (2 + 5+ 8)

- 1 a What are TLR's and PRR's?
- b Differentiate immunogenicity and antigenicity. Tabulate the properties of T and B cell epitopes.
- c Discuss the various components of innate response.
- OR
- d What is meant by Immune evasion?
- e Trace how the present day's vertebral immune system would have evolved?
- f Inflammatory response is a link between innate and acquired immune response. Justify.
  
- 2 a Discuss the role of Mast cells.
- b What are N K cells? Justify NK cells as the first line of defense in Viral infections.
- Discuss antigen processing and presentation pathways for intracellular antigens.
- OR
- d What are haplotypes?
- e Draw and discuss the structure and chemistry of Class II MHC molecules.
- f How does the mucosal immunity takes care of intestinal pathogens?
  
- 3 a What is meant by ADCC?
- b Draw and explain the structure of T Cell Receptor and sketch the stages of T cell development in the thymus.
- c Elaborate on the signal transduction pathways with reference to B Cells.
- OR
- d Define somatic hypermutation and class switching.

- 4 a What are Complement proteins?
- b Explain the immunological features of SLE and RA.
- c Explain the mechanism of immune evasion in cancer.
- OR
- d What are interleukins and interferons?
- e Note on any 2 B Cell Immunodeficiency disorders.
- f Discuss the mechanism of Type II and Type IV hypersensitivity reactions.
- 5 a What are the advantages of DNA Vaccines?
- b Note on ELISPOT and AlphaLISA.
- c How will you prepare an Monoclonal antibody?
- OR
- d What are humanized antibodies?
- e Elaborate on the mechanism of generation of immunotoxin. What are its applications?
- f Discuss the novel approaches to develop vaccines for immune related diseases.

Z-Z-Z

END