

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

**MSc DEGREE EXAMINATION MAY 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 Define acquired immunity,
b Write a brief note on Toll like receptors,
c Discuss in detail about cell associated pattern recognition receptors.
OR
d Define the term 'immunogenicity'.
e Write a note on organization of immune system.
f Explain in detail about the endothelial interaction and inflammation of leucocytes.
- 2 a What is meant by HLA typing?
b Explain the functions of macrophages.
c Describe in detail about the structure and genome organization of MHC and its role.
OR
d Define oxidative burst,
e Write the functions of antigen presenting cells.
f Discuss briefly about major histocompatibility complex and susceptibility to disease.
- 3 a What are called as subsets?
b Write a note on genetics of immunoglobulins,
c Explain in detail about T-cell types, development and selection.
OR
d What are T-cell receptor?
e Write a note on T-cell signaling and activation.
f Discuss briefly about development and biology of B-lymphocytes.
- 4 a Define graft rejection.
b Write a note on regulation of complement proteins,
c Describe in detail about evasion of immune response by cancer.
OR
d What are cytokines?
e Briefly explain the immunity developed against bacteria and virus,
f Discuss the immunology of transplantation and mechanisms of graft rejection.
- 5 a Define immunotoxins.
b Write the procedure involved in purification of antigen,
c Describe in detail about production and applications of monoclonal antibodies.
OR
d Expand SPR chips.
e Explain the process of microengraving for cell selection,
f Discuss in detail about immunodetection of antigen in cells and tissues.