



**BCH-003-1015035** Seat No. \_\_\_\_\_

**B. Sc. (Sem. V) Examination**

**August – 2021**

**BT - 503 : Immunology**

*(New Course)*

**Faculty Code : 003**

**Subject Code : 1015035**

Time :  $2\frac{1}{2}$  Hours]

[Total Marks : 70

**Instructions:**

**(1) Objective types of questions are compulsory**

**(2) Write any 5 questions out of 10 questions**

**1 [A] Answer the following (One mark) [04]**

1. What is immunity?
2. Full form: HSC
3. Write a function of dendritic cells?
4. Define: Hematopoiesis

**[B] Answer the following (2 mark) [02]**

1. Define: Primary Lymphoid Organs and write its name

**[C] Answer the following (3 mark) [03]**

1. Short note: Lymphatic system

**[D] Answer the following (5 mark) [05]**

1. Explain briefly about Hematopoiesis

**2 [A] Answer the following (One mark) [04]**

1. Full form: GM-CSF
2. Full form: PALS
3. What is Inflammation?
4. Define: Phagocytosis

**[B] Answer the following (2 mark) [02]**

1. Define: Adaptive Immunity

**[C] Answer the following (3 mark) [03]**

1. Write Innate immunity V/S Adaptive immunity

- [D] Answer the following (5 mark) [05]**  
1. Explain in detail about Lymph node
- 3 [A] Answer the following (One mark) [04]**  
1. Enlist different factors that influence immunogenicity  
2. Define: Hinge region  
3. What is haptent?  
4. Define: Adjuvant
- [B] Answer the following (2 mark) [02]**  
1. Define: B-Cell Epitope and write its properties
- [C] Answer the following (3 mark) [03]**  
1. Short note: Application of monoclonal Ab
- [D] Answer the following (5 mark) [05]**  
1. Explain: Types of ELISA
- 4 [A] Answer the following (One mark) [04]**  
1. Enlist function of Antibody  
2. Full form: ADCC  
3. What is transcytosis?  
4. Define: Agglutination
- [B] Answer the following (2 mark) [02]**  
1. Define: Precipitation and write its application
- [C] Answer the following (3 mark) [03]**  
1. Write a note on basic structure of Antibody
- [D] Answer the following (5 mark) [05]**  
1. Explain in detail about western blotting
- 5 [A] Answer the following (One mark) [04]**  
1. What is HLA complex?  
2. Write function of APC  
3. What is Antigen processing?  
4. Define: Exogenous Antigen
- [B] Answer the following (2 mark) [02]**  
1. Draw the structure of TCR-CD3 complex molecule
- [C] Answer the following (3 mark) [03]**  
1. Short note: Signal transduction in B-Cell
- [D] Answer the following (5 mark) [05]**  
1. Explain: structure, properties and function of MHC-II molecule

**6 [A] Answer the following (One mark) [04]**

1. Full form: CLIP
2. Full form: TCR
3. What is Antigen presentation?
4. Define: Endogenous antigen

**[B] Answer the following (2 mark) [02]**

1. Draw the figure of BCR with label

**[C] Answer the following (3 mark) [03]**

1. Short note: T-Cell receptor

**[D] Answer the following (5 mark) [05]**

1. Explain: MHC-I molecule

**7[A] Answer the following (One mark) [04]**

1. Define: Vaccine
2. Cytokines are one type of messenger molecule to communicate. True/False
3. Complement protein are synthesized in\_\_\_\_\_.
4. Define: Redundancy effect

**[B] Answer the following (2 mark) [02]**

1. Define: Toxoid and write its examples

**[C] Answer the following (3 mark) [03]**

1. Short note: Inflammation

**[D] Answer the following (5 mark) [05]**

1. Explain: Whole organism vaccine

**8 [A] Answer the following (One mark) [04]**

1. Cytokine are steroid in nature. True/False
2. Enlist cardinal signs of inflammation
3. What is MBL?
4. Define: Cytokine receptor

**[B] Answer the following (2 mark) [02]**

1. Draw the classical pathway of complement system

**[C] Answer the following (3 mark) [03]**

1. Short note: DNA vaccine

**[D] Answer the following (5 mark) [05]**

1. Explain in detail about alternative pathway of complement

- 9 [A] Answer the following (One mark) [04]**
1. Full form: SCID
  2. Full form: GVHD
  3. What is graft rejection?
  4. Define: Autoimmunity
- [B] Answer the following (2 mark) [02]**
1. Write about importance of immunosuppressive drugs with its examples
- [C] Answer the following (3 mark) [03]**
1. Write a note on IDDM
- [D] Answer the following (5 mark) [05]**
1. Explain in detail about HIV & AIDS
- 10 [A] Answer the following (One mark) [04]**
1. Type-III hypersensitivity is mediated by\_\_\_\_\_.
  2. Covid-19 is an example of influenza virus. True/False
  3. What is opportunistic infection?
  4. Define: Allergy
- [B] Answer the following (2 mark) [02]**
1. Define: Antigenic shift & antigenic Drift
- [C] Answer the following (3 mark) [03]**
1. Short note: Malaria
- [D] Answer the following (5 mark) [05]**
1. Explain: types of graft rejection
-