

**PAPER-ZOOA-CC4-10-TH**

**THEORY-FM-25**

**Answer question 1 and any four from rest.**

1. Answer any 5: 5x1
  - a. What is immunogen?
  - b. Which immunoglobulin can cross the uterine barrier
  - c. What is the fullform of MHC?
  - d. Is humoral immunity acquired or innate?
  - e. Name a hapten?
  - f. Name an adjuvant used vaccines.
  - g. What rays are used to evaluate RIA?
  - h. What is epitope?
2. Write the working principle of RIA. 5
3. What is the difference between an antigen and an immunogen, give example. 3+2
4. What is the function of MHC? What factors activate MHC? 3+2
5. State the difference between IgA and IgM. 5
6. Describe the structure of an antibody with diagram. 4+1
7. Describe antigen-antibody reaction. 5
8. What is the difference between T-cell and B-cell? 5
9. What are functions of IgD and IgE? 5

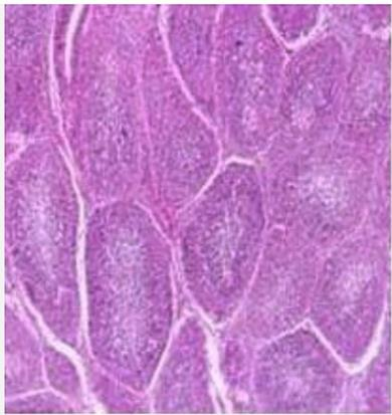
**PAPER-ZOOA-CC4-10-P**

**PRACTICAL- FM-15**

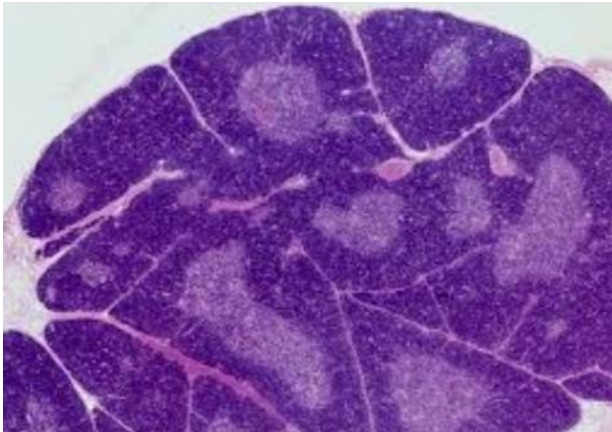
**All questions are compulsory**

1. Give a brief description of any lymphoid organ with its location. 4+1
2. Identify the following pictures with any two reasons each: 2.5x2

A.



B.



3. Write the basic principle of ELISA. Name two Reagents and two equipments needed for ELISA. 3+1+1

**PAPER-ZOOA-CC4-10-IA**

**INTERNAL ASSESMENT-FM-10**

**Choose the right option**

1. Which Immunoglobulin is a pentamer?  
a. IgM b. IgD c. IgA d. IgE
2. Which immunoglobulin is present in colostrum?  
a. IgM&IgA b. IgM&IgD c. IgE&IgM d. IgE&IgD
3. Which of the following cells produce antibodies?  
a. Mast cells b. Plasma cells c. B-cells d. T-cells
4. Which of the following cells of the immune system do not perform phagocytosis?  
a. Macrophage b. Neutrophil c. Eosinophil d. Basophil
5. Which can inhibit inflammation?  
a. Protein C b. TNF $\alpha$  c. RO d. Neuropeptide Y
6. Which of the following immunity is obtained during a lifetime?  
a. Acquired b. Innate c. Passive d. All the above
7. Which of the following cells is involved in cell mediated immunity?  
a. Leukemia b. Thrombocytes c. Mast cells d. T-cell
8. Monocytes differentiate into which type of phagocytes?  
a. B-cell b. T-cell c. Macrophage d. Neutrophil
9. Hapten is  
a. Epitope b. Small chemical grouping c. Carrier d. Immunogen
10. Which one of the following is a primary lymphoid organ  
a. Lymph nodes b. Thymus c. Spleen d. Tonsil